

# THE MODERN SCHOOLMAN

Vol. XX

MARCH, 1943

No. 3

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THE CATHOLIC MIND . . . . .	<i>America Press</i>

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Entered as second-class matter Dec. 1, 1928, at the post-office at St. Louis, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of Oct. 3, 1917, authorized on Jan. 15, 1929. Published in November, January, March, and May. Address communications to either the Editor or the Business Manager, THE MODERN SCHOOLMAN, 221 N. Grand Blvd., St. Louis, Mo. Printed by McMullen Printing Co., 4000 Laclede, St. Louis, Mo. No article or part of an article may be printed without permission.



## A FORGOTTEN SENSE, THE COGITATIVE ACCORDING TO ST. THOMAS AQUINAS

THE CONCEPT of psychology in vogue today is quite different from that which was in favor some two centuries and more ago. Modern psychologists are in search of psychical facts and seek for them with all the care and exactness that characterize the positive sciences. They frequently subject these facts to complex experiments and, with no consideration whatever for metaphysics, elaborate laws and theories in need of constant correction and completion.

The ancients also take facts and experience as their starting point, but only as a springboard to rise to a metaphysical explanation of the reality of the soul and its operations. Common problems are thus considered under different aspects; questions that were once discussed at great length are now neglected, not to say condemned, by the moderns, interested as they are in points of research whose value the ancients did not even suspect.

The study of the senses offers a striking example of this difference of view. The old psychology made a distinction between external and internal senses; it sought to learn the supra-sensible conditions of the former, their object and their connection with the soul; of the latter it strove to determine the number and to discover not so much their exterior manifestations as the intimate character of each and its part in the human act *par excellence*, the act of intellection. It spoke of *sensus communis*, and of the imaginative, cogitative and memorative faculties. Of the old internal senses modern psychology has kept, not the name, but some portion of the reality that was called *sensus communis*, which, in modern terminology, is sense consciousness. It discusses memory and imagination at great length, but completely ignores the cogitative, both in name and in fact.

For the last fifty years, this modern point of view has penetrated all the scholastic treatises published on psychology. In most of them there is some mention of the cogitative, but this is little more than a summary or transcription of St. Thomas' classic article (*S. T.*, I. 78. 4.). In some cases this text is supplemented with a few statements from John of St. Thomas. Many authors treat it in an appendix to the chapter on instinct<sup>1</sup> as conceived by the moderns. All in all, it would seem that modern scholastic philosophers implicitly admit that the doctrine of the cogitative now has no more than an historic interest and that what details of it retain some value go to make up an integral part of the much broader study of instinct.

Precisely what is to be said of the *vis cogitativa*? What is its true and complete function in human cognition? Is it merely an antiquated hypothesis which modern psychology has left behind, or does

<sup>1</sup> To the scholastics of the thirteenth century, "instinct" was not the complex function of modern psychology but a blind drive of nature toward an action to be performed. It was opposed to the cogitative. Cf. *S. T.*, I. 78. 4.

it constitute a part of the everlasting psychic make-up of man? These are the questions to which we seek an answer in the course of these pages.

To achieve this aim we must undertake a thorough study of the question, a study which, as far as we know, has never been undertaken. Our study must first of all be historical, for it is only after explaining, in all its breadth and with all possible objectivity, the Thomistic concept of the cogitative sense that we will be enabled to pass judgment on the actual worth of this theory and thus know whether it belongs in a museum of antiques or deserves a place of honor in contemporary thought.

### THE ESTIMATIVE FUNCTION

The Ancients begin their philosophizing with very simple facts of daily occurrence. The observation is made that the ewe flees from the wolf even before it has experienced the danger which threatens it, although it follows the dog which nevertheless bears a strong resemblance to the wolf; it recognizes its own lamb, but refuses to suckle another; it seeks a certain herb as a source of nourishment, but spurns a certain other though it has never tasted it. The wolf does not attack its own whelp to devour it. The dove hides from the hawk or the falcon. When springtime comes the sparrow picks up a bit of straw with which to build its nest, but passes up a splinter of wood. Such is the comprehensive list of facts which are continually made use of as a foundation in the research problem which we are undertaking.<sup>2</sup> And St. Albert the Great, the scientific

<sup>2</sup> These examples will be found in the following passages, which also constitute the principal sources of the doctrine with which we shall be concerned.

Albert the Great, *Opera Omnia* (Borgnet ed., Paris: 1890); *De Anima*, III, Tr. 1, c. 2 (vol. V, p. 317a); *Summa Philosophiae Pauperum*, pars V, *Isagoge in de Anima*, the authenticity of which is uncertain (vol. V, pp. 521-522); *Liber de Apprehensione*, also doubtful, pars III, n. 10 (vol. V, p. 581); *Comp. Theol. Verit.*, equally doubtful, II, c. 38 (vol. XXXIV, p. 65a); *Summa de Creaturis*, p. II, q. 39, "De virtute aestimativa" where in four articles Master Albert asks himself: *Quid sit virtus aestimativa, quod sit objectum ejus, quod organum ejus et quis actus?* (vol. XXXV, p. 336)—note in this text the twofold arabic origin of this doctrine.

St. Bonaventure, *Comp. Verit. Theol.*, II, c. 38 (Vives ed.), vol. VIII, p. 106.

St. Thomas, *De Ver.*, 25. 2; *Quaest. de An.*, art 13; *In II de An.*, lect. 13 (Marietti ed.), #398; *S. T.*, I. 78. 4; *S. T.*, I. 81. 3; *Opuscula omnia St. Thomae, De Potentiis animae*, c. 4 (Mandonnet ed.), vol. V. (The *De Potentiis animae* is not authentic as an opusculum, but is nothing other than a compounding of texts taken from other Thomistic works of clear authenticity.)

Sylvester de Sylvestris, *Commentarium in Summa Contra Gentiles*, II. 60, n. 1 (Leonine ed., vol. XIII), p. 423a.

As for the later scholastics such as Suarez and John of St. Thomas, they work over the traditional examples. The same may be said of the scholastics of the present time, with the exception of some who strive to put new life into the material by attributing to the human aestimative and cogitative the faculty of "fore-seeing danger" (Collin), of being the basis for certain sympathies or antipathies for which a rational explanation cannot be found (Hugon, II, p. 568); and a Canadian author, M. Filion (a Sulpician Father), writes: ". . . ita antiqui incolae regionum nostrarum qui Indi vocantur, mirabilem aestimative activitatem ostendebant, ad quam pervenerunt etiam albi



light of the middle ages, puts the whole matter in synthetic form when he says: "In general, every being endowed with sensation has a desire for the food which it needs for its nourishment."<sup>3</sup>

Of these facts some of them show us an attraction on the part of the animal for that which is proper to it, for that which is—whether the animal be conscious of it or not—a good, either for itself individually or for its species. The other facts display a tendency of the animal to draw away from what is dangerous, harmful, or a source of new evil for itself or for its species. We have here a first generalization which the ancients themselves expressed. How are we to explain this phenomenon of attraction and repulsion?

Saint Thomas calls attention to the fact that some previous experience does not furnish the explanation. "*Ovis fugit lupum cujus inimicitiam numquam sensit.*"<sup>4</sup> But are we to explain the phenomenon by some element of pleasure or displeasure to sight, hearing, or smell? The ancients were not unaware of this possible solution. They readily admit that in some cases, though not in all, the attraction or repulsion is sufficiently explained by the pleasant or unpleasant impression received by one or more of the external senses: "*Animal enim non solum movetur propter delectabile et contristabile secundum sensum,*"<sup>5</sup> writes the author of *De Potentiis Animae*. Though the ewe flees from the wolf,<sup>6</sup> it is not because the latter's color of fur or general appearance are unpleasant, or its scent repellant.<sup>7</sup>

Therefore, the external senses cannot furnish the explanation for these observed facts. Though St. Thomas goes no further in his inquiry, his master, Albert the Great, and even St. Bonaventure, wonder whether the imagination might not hold the key to the problem. Bonaventure decides that it does not: "*Ad imaginationem solam non sequitur affectus miseriae vel tristitiae vel fuga vel insecutio.*" And St. Albert in his commentary on *De Anima* gives the reason for this conclusion:

Every being endowed with sensation has at least two vital movements, retractability and the movement of dilation. And since these animals display self-motion in seeking their food, it follows that they must represent that food to themselves in one way or another by what we might call their imagination. But imagination, alone, is not enough to present the object to them inasmuch as it is useful or harmful, for all it does is reproduce the external sensations which, on their part, have no element of the useful or harmful.<sup>8</sup>

Contact is made with the object known through sight, if the object be blue or red, through hearing, if it be discordant or harmonious, homines [he is probably talking about the trappers], qui vitam eorum imitati sunt." Cf. Emile Fillion, *Elementa Philosophiae* (Montreal: 1938), vol. II, pp. 251-252.

<sup>3</sup> "Omne habens sensum habet desiderium cibi quod est fames." Albert the Great, *De Anima*, III, *loc. cit.*

<sup>4</sup> *De Ver.*, 25. 2. *supra cit.*

<sup>5</sup> Cf. *De Pot. An.*, *supra cit.*, and *S. T.*, I. 78. 4.

<sup>6</sup> Cf. Albert the Great, *Liber de Apprehensione*, *loc. cit.*

<sup>7</sup> Cf. *S. T.*, I. 78. 4.

<sup>8</sup> Cf. St. Bonaventure, *loc. cit.*, and Albert the Great, *De Anima*, III. Tr. 1, c. 2 (vol. V, p. 317).

through taste, if it be bitter or sweet, through smell, if it be odoriferous, through touch, if it be rough or smooth. But none of these senses reports whether the object be useful or harmful to the health or life of the animal and least of all to the preservation of the species. There is therefore, in corporeal beings, some real aspect which does not fall within the province of the exterior senses, or even that of the imagination, which, even according to modern psychology, elaborates only the data of the exterior senses. Some name had to be given to this real aspect; the Ancients simply called it *intentiones non sensatae*, a formula which defies translation.<sup>9</sup>

### THE ESTIMATIVE FACULTY

Had they been steeped in Positivism the Ancients would not have progressed beyond these facts. But they were not Positivists. For these facts, simple, no doubt, but none the less incontrovertible, they wanted some metaphysical explanation, which, to them, was the only explanation worthy of the human mind. That is the reason why, eschewing further experiments, they proceeded to reason on the data at hand.

Their first conclusion is that knowledge of *intentiones non sensatae* is a necessity of nature. Indeed, without this knowledge, the preservation of animal species could not be assured. That is why St. Thomas explicitly in the *Summa*<sup>10</sup> and implicitly in his other works views these facts as a simple application of the principle "*Natura non deficit in necessariis*". Who wills the end wills the means, and when the agent has sufficient power these means are realized without fail. The application of this principle at once completely transforms the material which furnished the starting point; what we have to work with is no longer a mere collection of facts, more or less rich, but a truth required by the principle of finality itself.

On the other hand, as all scholastic philosophers admit, no created agent acts directly by its own essence. Between the created essence and its operation there must of necessity be placed as intermediary some active potency or faculty. Consequently it must be admitted that there exists in animals some faculty or capacity for knowing

<sup>9</sup> Here are a few texts which throw light on this statement:

St. Albert the Great, "*Aestimativa est virtus sequens phantasiam et diversa ab ipsa et est determinans imitationem vel fugam in intentionibus apprehensis; quae, inquam, intentiones conjunctae sunt compositioni et divisioni phantasmatum, non tamen sunt acceptae a sensibus.*" *Summa de Creaturis*, loc. cit., a. 1, sol.

"*Est autem aestimativa virtus transcendens quia apprehensio sua non est formarum sensibilium et materialium sed immaterialium; bonitas enim et malitia, conveniens et inconveniens et nocivum in se non sunt formae materiales, neque in sensu cadentes exteriori, tamen sunt accidentia sensibilium: et horum est virtus aestimativa.*" *Philosophia pauperum*, loc. cit., (vol. V, p. 521a). Cf. also *De Anima*, III (vol. V, p. 317a); *Liber de Apprehensione*, loc. cit. (vol. V, p. 521a).

St. Thomas, "*Vis aestimativa per quam animal apprehendit intentiones non acceptas per sensum, ut amicitia et inimicitia, inest animae sensitivae secundum quod participat aliquid rationi.*" *De Ver.*, 25. 2. Cf. also *In III Sent.*, d. 26, l. 2; *Quaest. de An.*, art. 13; *S. T.*, I. 78. 4;

St. Bonaventure, *Comp. Verit. Theol.*, II, c. 38 (Vives ed.), vol. VIII, p. 106.

<sup>10</sup> *S. T.*, I. 74. 4.



what is useful, harmful, or harmless.<sup>11</sup> Now some name had to be given to this faculty. The Ancients called it *aestimativa*, that is, the faculty which "estimates", judges that an object is useful, harmful, harmless; or, as Suárez understood the term, "*aestimativa dicitur quia in rebus ipsis aliud aestimat quam quod exterius apparet*".<sup>12</sup>

Starting from experimental facts obtained from the observation of animals the ancients came to know of this estimative sense. Now man, too, is an "animal"; he too then, for the same reasons and for the same purpose, will have his own estimative sense. But there is a difference. Man is a rational animal. By reason of this simple fact man's estimative will be somewhat in a class by itself.

In the case of man the spirit, substantially united to the matter, effects together with that matter a principle of activity which is essentially one. Hence, in every human action this twofold element must of necessity make itself felt. That is why even in his most immaterial act of intelligence man always depends in some way on the material objects furnished by his body, itself immersed in a combination of essentially material conditions. The same is to be said of man's acts of sense cognition and of sense appetite. He cannot avoid having these acts shot through with a spiritual character of some sort. Of the sense faculties with which man is endowed some will experience this influence of the soul on the body more than others, and these will consequently exhibit a modality of action which, though it does not transform them into spiritual faculties, nevertheless raises them to a very definite superiority over the corresponding faculties found in animals. And it is precisely among the number of these privileged faculties that man's estimative faculty must be placed. St. Thomas writes: "*Aliquae vires sensitivae, etsi sint communes nobis et brutis, tamen in nobis habent aliquam excellentiam ex hoc quod rationi junguntur.*" The source of this excellence is to be sought, not in some property of our sensible nature, but in a kind of affinity of the human estimative with reason properly so called, a sort of recoil action originating in the spiritual soul:

Non per id quod est proprium sensitivae partis, sed per aliquam affinitatem et propinquitatem ad rationem universalem secundum quamdam *refluentiam*. Et ideo non sunt aliae vires, sed eadem perfectiores quam sint in aliis animalibus.<sup>13</sup>

This last text makes appeal implicitly to that principle of Dionysius which I once called the principle of contiguity,<sup>14</sup> by reason of which "beings inferior in the scale of *being* establish contact at their apex with what is less perfect in superior beings." If this is a true principle—and it is, since in the last analysis it is nothing but an aspect of the principle of finality—it is quite a normal thing that our sensible nature be bound to our intellectual reason by something which,

<sup>11</sup> For the full proof of this statement, cf. my article, "Faut-il encore parler de facultés de l'Âme?" *Revue de l'Université d'Ottawa* (April, 1940), sect. spec., pp. 111-144.

<sup>12</sup> Cf. Suárez, *De Anima*, lib. III, "De Potentiis cognoscitivis," c. 30, n. 7 (Vives ed., 1856), p. 705a.

<sup>13</sup> S. T., I. 78, 4 ad 5.

<sup>14</sup> Concerning this principle of contiguity, cf. my work *Intellectus et Ratio selon saint Thomas d'Aquin* (Paris, Ottawa: 1936), pp. 180-181.

while it remains in the material order, participates in some way with reason. This something cannot be other than this faculty whose object, though doubtless furnished by the external senses, is nevertheless not reached by them, namely, the human estimative. In the *De Veritate* St. Thomas calls it:

... quod est altissimum in parte sensitiva ubi attingit quodammodo ad partem intellectivam, ut aliquid participat ejus quod est in intellectiva parte infimius, ut dicit Dionysius, quod principia secundorum conjunguntur finibus primorum.<sup>14</sup>

Because this faculty is in man a thing apart, for clarity's sake a special name had to be found for it. To fulfill its purpose properly this name had to express both the sensible characteristics of the faculty and its proximity to the discursive function of reason, which is the inferior mode of intellectual cognition. The name *cogitativa* was finally decided upon. Indeed, for the thinkers of the middle ages, it expresses on the one hand this notion of successive cognition: "cogitare est considerare rem secundum partes et proprietates suas, unde dicitur quasi co-agitare,"<sup>16</sup> and this is applicable to sensible faculties. On the other hand, *cogitare* also implies intellectual cognition inasmuch as it is discursive. "Cogitare proprie dicitur motus animi deliberantis nondum perfecti per plenam visionem veritatis,"<sup>17</sup> as St. Thomas says in the *Summa*. And in the Commentary on the *Sentences* he calls attention to the fact that it is intellectual *cogitatio* which has received its name from the sensible *cogitativa*, because the process proper to human cognition consists in going from the material to the immaterial.<sup>18</sup> We may therefore propose a trial definition of the cogitative: it is the sensible faculty, proper to man, which, in man, plays a role analogous to that of the estimative in animals. "Quae est in aliis animalibus dicitur aestimativa naturalis in homine dicitur cogitativa."<sup>19</sup> The term, however, is of minor import; our task is now to investigate—and that in detail—just what it stands for.

#### DISTINCTION AMONG INTERNAL SENSES

First of all, we are dealing with a sense faculty. It will therefore have an organ, which is the brain. And because the Scholastics are

<sup>14</sup> Cf. *De Ver.*, 14. 1 ad 9. This same doctrine is also taught in the *In III Sent.*, d. 23, 2. 2. sol. 1 ad 3; and in the *In II de An.*, lect. 13 (Marietti ed.), n. 397.

<sup>16</sup> Cf. *In I Sent.*, d. 3, 4. 5.

<sup>17</sup> Cf. *S. T.*, II-II. 2. 1.

<sup>18</sup> Cf. *In III Sent.*, d. 23, 2. 2. sol. 1 ad 3. For this entire question of the meaning of *cogitare* in St. Thomas and its doctrinal origins, cf. my *Intellectus et Ratio* referred to above, pp. 86-90. Worthy of note is the fact that Alexander of Hales in his *Summa Theologica*, pars I, lib. II, inquisitione IV, Tr. I, sect. 2, q. 2, tit. 1, membrum 2 (Critical edition of Quarrachi, 2 vol., p. 453a), where he treats of the cogitative, writes: "ad 2: ... licet fiat secundum imprium rationis, non tamen in parte intellectiva, sed in parte sensitiva quae suadetur ratione. Et licet cogitare secundum appropriationem dictum sit partis rationis, nihilominus per extensionem illius partis quae rationi copulatur; unde cellula media dicitur logistica, i.e. rationalis, in qua operatur illa excogitativa." It is clear how, unlike St. Thomas, he derives the name of *cogitativa* from reason to the internal sense.

<sup>19</sup> *S. T.*, I. 78. 4c. This fact that the cogitative in man corresponds to the estimative in animals is again taught in *Sum. c. Gent.*, II. 60 (quoting Averroes). Cf. also *Quaest. de An.*, art. 13; *In II de An.*, lect. 13, n. 397. This is also the position taken by Suarez in *De Anima*, loc. cit., n. 7.



strictly dependent on the Arabs for this doctrine they adopt the theory of "cerebral localizations" proposed by Avicenna, Alfarabi and Averroes, themselves skilled in the medical art.<sup>20</sup>

This sensible faculty is a cognitive and not an appetitive faculty. Its act—our basic experiences testify to the fact—is an act of cognition which presents the object as beneficial or dangerous. Since, however, this object is apprehended dependently on the external senses, even though it is other than the proper sensible of each of these, as we have already seen, we have to say that the cogitative is an internal sense. Furthermore, like all cognitive faculties, it is to some extent disengaged from matter. This degree of immateriality is characterized by St. Thomas in the *Quaestio Disputata De Anima*:

Unus enim gradus est secundum quod in anima sunt res sine propriis materiis, sed tamen secundum singularitatem et condiciones individuales quae sequuntur materiam: et iste est gradus sensus qui est susceptivus specierum individualium sine materia, sed tamen in organo corporali.<sup>21</sup>

Is this internal sense a simple aspect of a single function, the other aspects of which would be the "common sense", imagination and memory? Or is it rather a faculty really distinct from the other three? We are here proposing the question, nowadays scarce considered, but at one time much disputed, of the number of the internal senses. To reach a solution the ancients had to define with great care the formal object of each of these senses as well as their specific operation, in a word, their nature. If then we wish to know just what the cogitative is, we must, if not treat the question in all its breadth, at least examine it in the light of the principles which, according to St. Thomas, are the basis for real distinction, and in the light of their application to the cogitative itself.

The facts considered and analyzed above make it clear that the cogitative is actuated by what we have called *species insensatae*, whereas common sense and imagination are actuated by species that come from the exterior senses. From this St. Thomas draws the conclusion that the cogitative is really distinct from both the common sense and the imagination.<sup>22</sup> We are evidently dealing with a simple appli-

<sup>20</sup> According to this theory there would be in the human brain three "cells" or "concavities." The first would contain the organ of the *sensus communis* or sensible consciousness and of the imagination; in the second, called the syllogistic cell, would be the organ of the cogitative, or, to be more exact, this organ would be in the upper portion of this middle section; the organ of the memory would be found in the third cell. This is the idea accepted in the thirteenth century by Alexander of Hales, St. Albert the Great, and St. Thomas. We find it again with Sylvester de Sylvestris in the sixteenth century and with John of St. Thomas in the seventeenth. For this topography of the brain as the ancients conceived it, consult especially Albert the Great in the *Summa de Creaturis* pars II, the third article of questions 35, 37, 38, 39, 40, where the author raises in turn the question of the organ of the *sensus communis*, of the *imaginativa*, of the *phantasia*, of the *aestimativa*, and of the *memoria*. The authors quoted are for one part St. John Damascene and St. Gregory of Nyssa, and for the other Algazel and especially Avicenna, together with a *Liber de Differentia Spiritus et Animae* attributed to a certain "Constabulus," whom I am unable to identify.

<sup>21</sup> *Quaest. de An.*, art. 13.

<sup>22</sup> The fundamental text here is *S. T.*, I. 78. 4, followed by all Thomists, and forms the basis of the Thomistic vulgate on the question as taught in any manual *ad mentem St. Thomae*.

cation of the principle admitted by all philosophers: "Any distinction in objects involves a distinction of potencies." "Secundum distinctionem objectorum attenditur distinctio potentiarum animae," as St. Thomas himself says in the *Quaestio Disputata de Anima*.

But is this application a legitimate one? Saint Thomas tells us, and Suarez agrees, that there must be a difference in the objects in their very nature as objects.<sup>23</sup> Is this condition realized in the present case? St. Thomas, and his commentator Cajetan with him, considers the affirmative answer evident: "Potentiae versantes circa intentiones insensatas sunt aliae a respicientibus sensata."<sup>24</sup> Suarez however rejects not only this evidence but also the solid foundation of the distinction between these two sorts of species as useless. He says that one may admit it if he so wishes, but in any case it is not deep enough to justify a real distinction between the corresponding potencies.<sup>25</sup>

In order to justify this specific distinction of the species, St. Albert draws attention to the opposition existing between the purely speculative character of imaginative cognition and the practical character proper to the estimative and cogitative. Between these two kinds of cognition, and consequently between the two series of species on which they depend, there will exist the same relation as between speculative and practical intellect. Nevertheless, Suarez is right when, though conceding this identity of relation, he denies the real distinction between the two intellects, and in doing that he remains faithful to traditional Thomistic teaching.<sup>26</sup>

In his *Cursus Philosophicus* John of St. Thomas approaches the question from a different angle. We know that the root of cognition is the immateriality of the cognitive faculty. This principle implies that there is in every cognitive faculty some minimal independence as regards matter and material conditions without which there could be no cognition whatever. It follows that the more complete this independence the more perfect the cognition which is founded upon it. Thomists and Suarezians agree on this point. On the other hand, an object—or rather the species which represent this object and through which it actuates the cognitive faculty—will be more imma-

<sup>23</sup> Cf. *Quaest. de An.*, art 13, and *S. T.*, I. 73. 3.

<sup>24</sup> Cf. Cajetan, *In I S. T.*, q. 78. a. 4. n. 5 (Leonine ed.), vol. V, p. 257b. This is indeed the way that Suarez understood it: "Quarta opinio, quae inter citatas probabilior habetur, duplex fundamentum habet. Primum: cognitionem sensitivam interiorem aliam fieri per species sensatas aliam per non sensatas, ac potentias per eas cognoscentes esse diversas: siquidem potentiae cognoscentes per diversarum rationum species, diversas esse oportet." *loc. cit.*, n. 9.

<sup>25</sup> Cf. Suarez, *loc. cit.*, p. 708, n. 15.

<sup>26</sup> "Oportet igitur quod sicut intellectus practicus se habet ad speculativum, ita se habeat aestimativa ad imaginationem." St. Albert the Great, *De Anima*, III, *loc. cit.* (vol. V, p. 317a). "Differt intentionem illam accipere per modum veri speculativi tantum, et accipere eandem per rationem appetibilis vel detestabilis. Et primo intentionem accipit phantasia, secundo modo aestimativa." *Summa de Creaturis*, II, pars 1a, q. 39, a. 1 ad 1.

Suarez replies, ". . . negatur iudicium practicum et speculativum fieri a potentiis diversis, cum melius multo fiant ab eadem, uno scilicet in altero fundamentum habente." *loc. cit.*, n. 15, p. 708b.

As for Thomas' view, his article in the *Summa*, I. 79. 11, is too well known to need quoting: "Intellectus practicus et speculativus non sunt diversae potentiae."



terial in proportion as they are more abstract, since abstraction proceeds precisely from the fact that the object is disengaged either totally from matter and its conditions, as is the case in intellection, or partially from certain conditions of matter only, as happens in sense cognition. The greater the freedom of these species from matter, the greater their universality, and the higher their perfection. These different degrees of abstraction will thus offer a foundation for establishing the specific differences between the objects of different faculties of cognition and hence for justifying the real distinction between them as well as their multiplication.<sup>26a</sup>

John of St. Thomas applies these principles to the species of the common sense and the imagination and to those of the estimative and cogitative. The species of the first named senses are furnished by the external senses and depend upon them, so that they have only a rather imperfect degree of abstraction, and consequently, of immateriality. The second, though taken from what the external senses furnish, are not themselves furnished by those senses; they are and remain *species insensatae* (let us here call to mind the dictum of Algazel, quoted by the author of *De Potentiis Animae*: "Aestimativa est virtus apprehendens de sensato quod non est sensatum"). They have therefore a greater degree of independence from the conditions of matter. This is all the more true because they contain—and John of St. Thomas insists on this fact—the element of utility and harmfulness, not to the external senses, but to the nature itself, considered either in each individual or in the entire species. Were it otherwise, St. Thomas remarks,<sup>27</sup> the external senses and the imagination would have sufficed and there would be no need for the estimative and the cogitative.

If then the object of this last faculty is more abstract than that of the imagination and is therefore specifically distinct from it, the faculties themselves will needs be really distinct. The difficulty raised by Suarez against the Thomistic doctrine no longer has point; the distinction between *species sensatae* and *species insensatae* is not at all an empty one; indeed that distinction is sufficiently deep to serve as foundation for the real distinction between the estimative and cogitative and the common sense and imagination. In this way we establish the existence of an autonomous faculty called estimative in animals and cogitative in man.<sup>28</sup>

The reasoning process of the great Thomist is no doubt captivating. For it to be irrefutable, two questions would have to be answered. First of all, is it true that every degree of abstraction in species established a specific difference between those species? Again, is it true that the species which actuate the estimative are more abstract than those of the imagination? As long as an affirmative answer to both these questions has not been justified the problem of the existence of the estimative and cogitative will not have been solved but only pushed back.

<sup>26a</sup> Cf. John of St. Thomas, *Cursus Philosophicus* (edited by Reiser, O.S.B.), vol. iii, *Philosophia Naturalis*, p. IV, q. 8, "De sensibus internis," art. 1, p. 244.

<sup>27</sup> Cf. S. T., I. 78. 4, and John of St. Thomas, *op. cit.*, pp. 249b-250a.

<sup>28</sup> John of St. Thomas, *op. cit.*, p. 250a-b.

As far as I know, John of St. Thomas never attempted to do this, just as Suarez made no attempt to prove his negative answer to the problem. On the other hand, Saint Thomas never drew an argument from the greater or less degree of abstraction when he wished to prove specific distinction between the five senses or between imagination and *sensus communis*.<sup>28</sup> We have reason to suppose that if he did not do so it was because he saw that there was no need for it. Still, the objection may be proposed that Saint Thomas makes a real distinction between the two kinds of faculties which he calls *sensitivum* and *intellectivum*. Here he founds his distinction on a difference in the degree of abstraction of the object. On a simple degree of abstraction? I rather think not. It would be more exact to speak of the presence in the *intellectivum* of an abstraction properly so called which is not found in the *sensitivum*. This abstraction affects not only one or other of the conditions of matter, but matter itself. The abstraction of the *sensitivum*, on the contrary, is not a true abstraction; it cannot make these potencies intrinsically independent of matter, as is done in the abstraction of the *intellectivum*. Whence it is clear that in this case the opposition of material-immaterial is sufficiently marked to serve as a foundation for a specific and even a generic difference. When it comes to distinguishing the estimative from the imagination we are confronted in both cases with dependence as regards matter, and a mere difference of degree in this dependence is hardly enough to justify a specific difference. It would therefore seem to be more in harmony with the truth and with the thought of St. Thomas not to answer the first question in the affirmative.<sup>29</sup>

As for the second question, it can be solved only by a very close inspection of the *species sensatae* and the *species non-sensatae*. Both are abstract in the sense that they do not represent all and every one of the notes which go to make up the object known, but only some particular aspect. The ewe, by sight, knows only something which is colored and has some certain form or figure; by hearing it knows a thing as sonorous and by smell knows it as having an odor. Each of these senses performs an abstraction, but an abstraction in the improper sense of the term. The ewe's *sensus communis* gathers together all these external sensations and puts them together to form the wolf-object known through the senses; at once this centralized data puts the imagination into act: the ewe represents to itself within itself the wolf-object.

Thus far nothing in our analysis leads us to suspect that the ewe will leap up and flee. Yet that is exactly what takes place. This sudden flight, brought about by the sight of the wolf, the only phenomenon which falls under our experience, must have some explanation. Sufficient reason for it must lie in some representation that came up in the ewe's consciousness, by reason of which the ewe

<sup>29</sup> It would be well to read again at this point the *Quaest. de An.*, art. 13, where the entire question of the specific distinction of the faculties is very fully explained; then *S. T.*, I. 78. 3, where the principles of the distinction of the exterior senses is laid down: "Exterius ergo immutativum est quod per se a sensu percipitur et secundum cuius diversitatem sensitivae potentiae distinguuntur." And lastly *S. T.*, I. 78. 4, on the distinction between the imagination and the *sensus communis*.



cognizes this concrete object which it saw, heard, smelled, as constituting at this precise moment something which is a source of definite danger for it. This representation it is which belongs to the estimative. This faculty has then passed from potency to act, and that under the influence of the object, taken, not in its material character, but in images dependent upon it, in *species impressae*, as the scholastics put it, which originated in the object and were received in the estimative. Then it is that this faculty, put into first act, can pass to second act, that is to say, can place the act of knowing the wolf, not as something colored, sonorous, odorous, but as dangerous.

Whence come these *species impressae*? The simple truth is that we do not know.<sup>30</sup> All that we can say is that they do not come from the other internal or external senses, as the analysis of the fundamental facts showed us. That is why they are called *insensatae*. Are they abstract? In the sense which we admitted for the other senses they certainly are, for they represent the wolf only under a certain aspect, that of harmful. Are they *more* abstract? Are the *species impressae* of sight more abstract than those of hearing or smell? It seems to me that it is impossible to answer yes or no. These species represent two or three mutually irreducible aspects of the same body, and that is why they are specifically different. As I see it, the same is true for the species of the estimative and those of the other senses. In dealing with them we cannot speak of greater or less abstraction, but only of a different abstract aspect, which is neither what is colored, or sonorous, or odorous, or even the object as constituted with its sensations grouped together by the *sensus communis* in the imagination. It is precisely in this that we find a specific difference between these two series of species and consequently between the potencies which they are to actuate.

Will the same be true for the aestimative and the memory? St. Thomas answers that it will. Research into the principles on which this affirmation is founded gives us an occasion to go deeper into the part played by the estimative and cogitative.

As St. Thomas sees it, memory has the same relation to the aestimative as imagination has to the *sensus communis*. In fact, just as the imagination preserves the *species sensatae* received from the external senses and grouped by the *sensus communis* around the object known, so the memory preserves the *species insensatae* of the estimative. For, the imagination, according to St. Thomas' metaphor, serves as a strong-box in which the first type of species is kept; the memory serves the same purpose for the second group.<sup>31</sup> This doctrine is evidently founded on the great need of animal nature, as well as on the data of experience. Pigeons know at what time they are

<sup>30</sup> This is why I see no need of tarrying here on the discussion that is rife among scholastics concerning the origin of these species. It is an analogous problem and one as obscure as that which moderns call the problem of the origin of instinct. Those interested in the question will find worthwhile matter in the *Psychology* of Remer-Geny, S.J. (Rome: 1925), pp. 115-116, and the whole treatise in John of St. Thomas, *op. cit.*, *ibid.*, art. 4, pp. 265-271.

<sup>31</sup> Cf. *De Potentiis Animae* (Mandonnet ed.), vol. V, p. 355; S. T., I. 78, 4, and the commentary of Cajetan.

fed and gather together at that time; the elephant in the zoo recognizes the practical joker who gave him a pebble instead of a cookie. It is evident that the birds of the air and the pachyderm himself have somehow kept the representation of the object as a good thing or a bad thing.

The reason for this is that the memory knows the past as past, that is to say, the animal is conscious of what was already seen, already heard, already smelled, already avoided or sought, and that not only at the moment when one of these sensations is renewed. This apprehension on the part of consciousness is evidently not something intelligible, but something sensible, not otherwise than the knowledge of the object as present and the consciousness of its actual presence.<sup>32</sup> But the past, as past, is not given by the external senses; it is therefore one of these *intentiones insensatae*, which are the object of the estimative. As we find in the *Summa Theologica*: "Ipsa ratio praeteriti quam intendit memoria inter hujusmodi intentiones computatur."<sup>33</sup>

The statement is important. For then the memory will not concern itself only with the useful and the harmful, which is not furnished by the external sense, but also with every external sensation gathered by the *sensus communis* and preserved by the imagination, provided it be in order to recognize them. In such a case there seems to be no reason for seeking a real difference between the estimative and the memory, especially since, as St. Thomas says, remembering comes about as occasioned by what is useful or harmful.<sup>34</sup> Nevertheless, St. Thomas insists on the real distinction for two reasons.

The first reason is physiological. He says in the *Summa*: "Recipere et retinere reducuntur in corporalibus ad diversa principia."<sup>35</sup> Where there is question of bodily operations, those which consist in simply receiving the impressions from the object will have to be referred to an organ, and those which consist in preserving these same impressions will have to be referred to another organ. On the other hand, although, according to St. Thomas' own teaching,<sup>36</sup> the faculty does not exist for the organ, but the organ for the faculty, still, one of the signs by which we know that the faculties are different is precisely the fact that the organs are different, since it was impossible for nature not to harmonize the organs with the faculties they were destined to serve. But the argument for diverse organs, taken from the discarded physiology of the middle ages,<sup>37</sup> not even the most enthusiastic Thomist in our own day would press very far.<sup>38</sup>

<sup>32</sup> Cf. *Quaest. de An.*, art. 13; *S. T.*, I. 79. 6.

<sup>33</sup> Cf. *S. T.*, I. 78. 4. *supra cit.*

<sup>34</sup> "Cujus signum est, quod principium memorandi fit in animalibus ex aliqua hujusmodi intentione, puta quod est nocivum vel conveniens." *Ibid.*

<sup>35</sup> *Ibid.*, and also *Quaest. de An.*, art. 13. The same idea is put more explicitly in *De Memoria et Reminiscentia*, lect. 2 (Pirota ed.), n. 321.

<sup>36</sup> Cf. *S. T.*, I. 78. 3.

<sup>37</sup> Cf. *De Memoria et Reminiscentia*, loc. cit.; also *S. T.*, I. 78. 4; John of St. Thomas, *Cursus Philosophicus*, loc. cit., p. 245a.

<sup>38</sup> May I be permitted to call attention in this connection to the fact that St. Thomas' position in relation to the science of his time is fundamentally the same as that of the philosophers of our own time in relation to the science of today. Just as is done today, the great masters of scholasticism used to consult the scientists and doctors of their time. If mistakes were



The second argument is based on the fact that in the estimative, as also in the *sensus communis* and the imagination, the movement goes from things to the soul, since the object actuates and modifies the faculty, whereas in the case of the memory the movement goes from the soul to things. Sertillanges expresses this in a felicitous phrase: "The other sensible faculties are centripetal; this one is centrifugal."<sup>39</sup> There is therefore a very different movement in the memory and in the cogitative, and, as St. Thomas adds, where the movement is different, the principles are different, and therefore the faculties are different.<sup>40</sup> It seems strange that none of the treatises of scholastic philosophy more or less *ad mentem sancti Thomae* which have been published within the last fifty years makes much of this argument. Indeed, why should this difference of movement be so deep that it demands two specifically distinct potencies? St. Thomas gives no explanation of this.

It is clear that St. Thomas affirms the distinction between the estimative or cogitative and the other internal senses. No one, not even Suarez, quarrels with the general principles which he makes use of to defend this thesis. The difference of opinion is on the application of these principles to the particular case of the estimative (and of the other senses as well). St. Thomas seems to consider as evident and in no need of proof that these different faculties have different formal objects, that the centripetal and centrifugal movement reaches down to the very nature of the faculties. To other thinkers all this does not seem so evident. Thomas' disciples merely repeat the words of the Master, without adding anything, and when one of their number, John of St. Thomas, for instance, tries to go deeper, he only succeeds in pushing the problem back a step. The problem itself remains without a solution. We are thus left to make a choice between two positions: we must either leave the question open, or accept the view of the Angelic Doctor, but only out of fidelity to the thomistic tradition, urged by a sort of argument from comparative authority.<sup>41</sup>

### FUNCTION IN INTELECTION

Up to this point we have spoken as much and more of the estimative of animals than of the cogitative in man. All, however, that we have said of the first is true of the second; for, as we have seen in St. Thomas himself, the cogitative is to man what the estimative is to animals. We have indicated the points of similarity in this analogy. We must now consider the differences and study what is peculiar to the cogitative, namely, the part it plays in human cognition.

Above all we must not lose sight of the sensible, and therefore corporeal and material, nature of the cogitative, no matter what part it plays and the extent of the part it plays as seen by St. Thomas.

made it is the scientists and not the philosophers who are to blame. Six hundred years from now, what will our great, great nephews think of the scientific data of today over which thinkers take such pride?

<sup>39</sup> Sertillanges, O. P., *Saint Thomas d'Aquin* (Paris: 1925), vol. II, p. 136.

<sup>40</sup> Cf. *Quaest. de An.*, art. 13.

<sup>41</sup> For the development of this idea and its justification cf. my article, "Comme être thomiste," *Divus Thomas* (Piacenza: 1932), pp. 260-262.

Even when he identifies<sup>42</sup> the cogitative with the *intellectus passivus*, which Aristotle discusses in the third book of his concerning the soul and which Averroes considers as constituting the specific difference of man, St. Thomas strongly insists that man can be distinguished from brute beasts only by a spiritual element, and that that *intellectus* is corruptible, and therefore material. The cogitative, moreover, can know only what is concrete, singular, individual. This too St. Thomas never tires of repeating, even when he seems to accept a common nature as the object of this faculty and a rational process as its act.

Still, it is all important to understand clearly how the cogitative reaches and knows this concrete object, these *intentiones particulares*, and consequently, how this sense faculty functions. Frequently repeated by the Angelic Doctor is the idea that the cogitative is to these *intentiones particulares* what reason is to the *intentiones universales*.<sup>43</sup> This similarity between the sensible and the spiritual faculty Saint Thomas expresses by the verb *conferre*, and its derivatives, *collatio* for the act, and *collativa* for the adjective. But he also uses the same verb as a technical term to designate the operation of man's intelligence inasmuch as it is discursive. As I have tried to show in a study on *Intellectus et Ratio Selon Saint Thomas*,<sup>44</sup> *conferre* in a rather general sense signifies that process by which the human mind simply takes possession of multiple elements for the purpose of reaching some truth, through simple comparison of two or more objects. In the strict sense, the word can stand for the work of the mind given over to more or less long and difficult search, making use of known elements to raise itself to the level of a truth heretofore unknown. Finally, in a still more narrow sense, it would be the aspect taken by the discursive process of the *ratio* which, once it has gathered together the elements of its reasoning process, places them one next to the other, as if to pass thus more easily from one to the other and discover the sought-for truth.

If such is the case, Saint Thomas conceives the work of the cogitative on the pattern of reason. This is so true that he proceeds in the same fashion to explain the name of *ratio particularis* or even of passive intellect which the cogitative often takes,<sup>45</sup> and to point the fundamental difference between the cogitative and the estimative. He writes in the *Summa Theologica*: ". . . alia animalia percipiunt hujusmodi intentiones solum naturali quodam instinctu, homo autem

<sup>42</sup> Cf. especially *Sum. c. Gent.*, II. 60 *passim*, 73 *passim*. These chapters should be quoted in their entirety. We shall quote only *In VI Ethic.*, lect. 9 (Pirotta ed.), n. 1249: ". . . vim cogitativam sive aestimativam quae dicitur ratio particularis. Unde hic sensus vocatur intellectus qui est circa sensibilia vel singularia. Et hunc Philosophus vocat in tertio *de Anima* intellectum passivum, qui est corruptibilis." We shall come across these passages again.

<sup>43</sup> Cf. among other passages: *In II Sent.*, d. 23, 2. 2. sol. 1 ad 3; *In III Sent.*, d. 26, 1. 2; *In II de Anima*, lect. 13 (Pirotta ed.), n. 396; *In VI Ethic.*, lect. 1, n. 1123; *In I Meta.*, lect. 1, n. 15; *Sum. c. Gent.*, II. 60. n. 1; *Quaest. de An.*, art. 13; *S. T.*, I. 78. 4, and I. 81. 3; *De Potentiis Animae*, c. 4 (Mandonnet ed.), vol. V, p. 355.

<sup>44</sup> Cf. my *Intellectus et Ratio selon saint Thomas d'Aquin*, pp. 90-92.

<sup>45</sup> Cf. in particular *In VI Ethic.*, lect. 9, n. 1255.



per quandam collationem." This doctrine of the later years of his teaching was also the one he defended in his youth, as we see in the *Sentences*: "In the other animals there is no *collatio*; they reach these objects through an impulse (*instinctu*) of nature; that is why their operation is not called reason but estimation."<sup>46</sup>

To St. Thomas, then, this *collatio* is characteristic of the specific function of the cogitative, and this precisely by reason of the union in man, and in man alone, of the sense nature with an intellectual nature, *propter conjunctionem ad animam rationalem*, as is explained in the same article of the *Sentences*. And the response to the fifth objection in the article of the *Summa* referred to above declares this to be by reason of a certain affinity and a certain proximity to reason which can know the universal, and which overflows, as it were, into the sensible part, "*secundum quandam refluentiam*". It is by reason of its corporeal nature that the cogitative can deal only with singular notions (*intentiones particulares*); it can act upon these by *collatio* because of its proximity, in a single person, to an intellectual nature.<sup>47</sup>

It is not enough to say that the proper act of the cogitative is this *collatio*. We must go deeper and try to see the mechanics of this operation. If we look closely at the texts of St. Thomas we see that the matter is quite complicated.

To begin with, two texts tell us that the *intentiones particulares*, and therefore the knowledge of the object as harmful or useful, are the result of this *collatio*, somewhat in the way that a speculative or practical conclusion flows from an intellectual reasoning process properly so called. This is indeed what is suggested by the word *inquirere*, employed in the *De Anima* (a. 13): "... ad haec quidem cognoscenda pervenit homo, inquirendo et conferendo." In this case the analogy between the cogitative sense and the intellect is quite easy to understand.

We must, then, admit a reasoning process in the cogitative. And if this is admitted, a judgment must also be admitted! These words in no wise frighten St. Thomas. In his Commentary on the *Ethica* he has put down this surprising text:

Sicut pertinet ad intellectum in universalibus iudicium absolutum de primis principiis, ad rationem autem pertinet discursus a principiis in conclusiones: ita et circa singularia vis cogitativa vocatur intellectus secundum quod habet absolutum iudicium de singularibus. . . . Dicitur autem ratio particularis secundum quod discurrit ab uno ad aliud.<sup>48</sup>

It is all there: judgment and discursive process, and even something in the cogitative which is equivalent to the distinction between *intellectus et ratio*. And let it be noted that this text corresponds to nothing in the Greek text of Aristotle. Furthermore, he teaches exactly the same doctrine in the *Summa Contra Gentiles*: "Cum virtus cogitativa habeat operationem circa particularia quorum intentiones dividit et componit . . ." Here we have the technical term to describe the judgment. Elsewhere: "Hujus autem cogitativae virtutis est distinguere intentiones individuales et comparare eas ad

<sup>46</sup> S. T., I. 78. 4.

<sup>47</sup> Cf. *In III Sent.*, d. 23. 2. 2.

<sup>48</sup> Cf. *In VI Ethic.*, lect. 9, n. 1255.

invicem, sicut intellectus qui est separatus et immixtus comparat et distinguit inter intentiones universales."<sup>49</sup> Even though these lines are taken from the author's exposition of the thought of Averroes, they are not rejected by St. Thomas who attacks the Arab on another point and grants him this one, which contains precisely one of the meanings of the verb *conferre*.

St. Thomas' authentic thought therefore admits for the cogitative a capacity for judging and a discursive process, and does so even in passages where the organic and corporeal character of this faculty is strongly emphasized. Is there some contradiction here, or at least a lack of logic? Suarez seems to suggest as much when he writes: As for the cogitative, many consider it as a sensitive potency, proper to man, capable of reasoning and judging on singulars. But such an operation is beyond the powers of a sensible faculty! Let us then say that the cogitative is simply nothing more than the internal faculty, inasmuch as, according to the human way, it distinguishes what is harmful and what is useful. In man it has a greater perfection, because it acts not only under the drive of nature, but is also directed by a more noble cognition and experience and often by reason itself.<sup>50</sup>

It would indeed be most extraordinary that Thomas should fall into this lack of logic or contradiction, especially as in the same context, and often in the same sentence, he affirms both the organic nature and the judgment or discursive process of the cogitative.<sup>51</sup> As good exegetes we must therefore examine as closely as possible the authentic thought of the Angelic Master. This will necessitate a complete—and therefore sometimes complex—analysis of the part played by the cogitative in intellectual cognition.

#### COGNITION OF THE SINGULAR

It is in his commentary on Aristotle's *De Anima*, speaking of the formulas "*sensibiles per se* and *sensibiles per accidens*", that Saint Thomas tells us, though nothing in the Greek text suggests it, how he conceives the knowledge of the individual by the cogitative.<sup>52</sup>

In order to be *sensibile per accidens*, a known object must verify the two following conditions: first, the object must be something accidental as regards the proper object of an external sense. What is white is the proper object of the sense of sight, but whether or not that which is white is a man or a ball or a dog is accidental to it as the proper object of sight. Man (or ball or dog) is, therefore a *sensibile per accidens* as regards the sense of vision. Besides, the knowing subject must in one way or another apprehend this object, else there could be no question of an act of sensation. In other words, a *sensibile per accidens* must be by its nature (*per se*) knowable for some other cognitive faculty of the same sentient subject. What can this other faculty be?

There are but two possibilities. Either this object, called *sensibile per accidens*, can be apprehended by some other external sense, or it

<sup>49</sup> Cf. *Sum. c. Gent.*, II, 73, n. 15; and 60, n. 1.

<sup>50</sup> Suarez, *De Anima*, c. 30, "De numero sensuum interiorum," n. 7 (Vives ed., Paris: 1856), vol. III, p. 705a.

<sup>51</sup> Cf. for example, *Sum. c. Gent.*, II, 73, n. 16.

<sup>52</sup> Cf. *In II de Anima*, lect. 13 nn. 395-398.



cannot be thus apprehended. The following example may be given of the first case: sugar is white and sweet. From the point of view of sight, what is sweet is *sensibile per accidens*, for it is accidental for a white object to be also sweet. But as regards taste, what is "sweet" is a proper sensible. In the second case, either the object is apprehended in abstract or universal fashion, and then it falls under the proper object of the intellect, or it is apprehended in its concrete and individual singularity, so that I see a colored object (*video coloratum*), and thus perceive that it is my friend John, or his dog, Sport (*percipio hunc hominem, vel hoc animal*), in which case, if the cognizing subject is a man, he apprehends John or Sport by the cogitative, and if he is a brute animal, by the estimative.

Thus, for St. Thomas, the individual as such—not the abstract notion of the individual, but the concrete reality of individual, of singular—is the object of the cogitative or estimative. And this is as it should be: it is a *species insensata*! It can therefore not be of the domain of the imagination, which simply preserves sensible data, nor of that of the intellect, a faculty which, with man at least, deals with what is universal. The only thing left, really, is the cogitative or estimative.

Each of these, however, will apprehend the individual differently. The first, as St. Thomas teaches us, knows the individual as existing in a common nature, *ut existens sub natura communi*, a thing which the second cannot do. What does he mean by this?

The ewe knows her lamb as something concrete, individualized, but not inasmuch as it is this individual possessing the nature of a sheep; she knows it only in that she knows, without being conscious of it, that she is impelled to give her milk to this white, baa-ing, gamboling object, that to this other object, green and flexible, which caresses her muzzle and which we call grass, she must go to eat it. In other words, the animal, by its estimative, apprehends the individual thing merely as the principle of an action to be performed or an influence to be undergone (*secundum quod est terminus et principium alicujus actionis aut passionis*). This knowledge of the individual thing thus reduces itself simply to the small initial impulse which sets in motion the psychic and physiological mechanism which culminates in nursing the lamb or eating this grass. This is quite natural, since this faculty is given to the animal to guide it as to what actions are to be performed or avoided, as useful or harmful to its nature. This Thomistic interpretation of animal behavior naturally calls to mind certain modern descriptions of blind instinct showing "every action immediately suggested by the present image, reduced to this representation, enclosed within it, and not going beyond."<sup>53</sup>

The cogitative, for its part, apprehends the individual thing, not only as the term or principle of action or passion, but *ut existens sub natura communi*. What may be the meaning of this formula, unique<sup>54</sup> if I am not mistaken, in the works of St. Thomas?

<sup>53</sup> Cf. Palhoriès, *La philosophie au Baccalauréat* (Paris: 1936), vol. I, p. 461.

<sup>54</sup> There is indeed something like this in *In VI Ethic.*, lect. 1, n. 1123, but it is far from being as explicit.

St. Thomas tells us that the cogitative knows *hunc hominem prout hic homo, hoc lignum prout est hoc lignum*. It therefore knows Peter as something concrete in which human nature is realized, and this oak table as something concrete in which is realized the nature of that tree which we call an oak. This is something which the estimative does not do. In the same way the cogitative knows not only Peter, but also James and Louis and other individuals, even if the agent has nothing to do with them at the time. This is evidenced from the opposition that St. Thomas here establishes between the estimative and the cogitative.

Does therefore the cogitative, a sensible and organic faculty, know the common nature, that is, man or oak as universal? St. Thomas is careful to say no such thing. He says that the cogitative knows the individual as existing, and as coming under the human nature. Strictly speaking, therefore, it knows only the individual. Yet, the human being who makes use of his cogitative sense becomes conscious—a thing that the brute beast could never do—that this object-individual which he apprehends by his cogitative realizes the universal nature of man or of oak, and he knows this universal nature of man or of oak by his intellect.

St. Thomas refers to this interpretation when he adds the explanation immediately following “quod contingit ei in quantum *unitur* intellectivae in eodem *subjecto*”. What the cogitative receives from its union with the intellect is not to know the individual, but to know the individual as existing concretely while realizing an universal nature. And when St. Thomas insists on the fact that it is united with the intelligence in one and the same knowing subject, he is applying his basic doctrine of the substantial unity of the body and the soul constituting a single person, a single true principle of operation.

This single agent places its operation through the medium of its different faculties. When I know Peter or this table my concrete vital act of knowledge is one, but each of my corporeal or spiritual faculties serves me as an instrument to place the act. Through vision I know this object as colored and possessing certain shapes; through the *sensus communis* I group these different *colorata* about a single nucleus; through the imagination I pigeonhole it and preserve it; through my cogitative I know it as an individual thing, and since at the same time, through my intelligence, I have, occasioned by this concrete object, formed the universal idea of man, I, one single knowing subject, finally come to know Peter as concretely existing in human nature.

Of course, life leaves intact the unity and instantaneous character of this cognition which psychological analysis—and it alone—has just cut up into parts. In this way we come in contact with the part played by the cogitative in intellectual cognition.

(To be continued)

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## HIPPOLYTE TAINÉ AND THE BACKGROUND OF MODERN AESTHETICS

*Editor's Note:* In the *Journal of Philosophy*, September 24, 1942, Dr. Jenkins published an article entitled "The Postulate of an Impoverished Reality" wherein he formulated, proceeding historically and analytically, a basic postulate of modern thought which "posits a universe in which only matter and motion are real" and as a necessary corollary denies "any real status within this universe to God, spirit, or purposeful design . . ." His attention was then directed toward the metaphysical and epistemological content of the modern tradition. In the present article he is concerned with the consequences of this postulate in the formulation of modern aesthetic theory.

THE CONTENT of this essay is largely historical, consisting chiefly of a close analysis of Taine's aesthetic theory, and of the principles upon which this theory is established. But the purpose behind it is critical as well as merely expository; its intent is to derive from this historical study of the past an understanding of certain aesthetic difficulties that sorely perplex the present. The point of departure of this endeavor is the conviction that very nearly all modern aesthetic thought is haunted by a persistent and fundamental problem that remains unsolved. This problem concerns the nature of the aesthetic object: it centers around the attempt to discover what art is about, and so to explain what kind of knowledge, if any, art conveys. The question here at issue can be phrased in several ways: What is art a report of? What is the source of the artist's creative impulse, and what is his intention in creating art? What is the nature of aesthetic experience, and what is it that we here attend to and grasp? Or finally, and perhaps most basically: What is the difference between art and science?

I think it is everywhere apparent that this problem is not adequately treated in contemporary aesthetics. In fact, it is only rarely that these questions are openly and honestly faced. Modern thought exhibits a hesitant and vacillating attitude toward them, an inability to rest content with any one answer; and the consequence of this is that aesthetic theory is vitiated at its very core by a fatal ambiguity. We are told, on the one hand, that art is not significant, since it does not refer beyond itself. Art *has* no meaning, it *is* meaning. The artist seeks but to express himself, and aesthetic experience is mere delight in the "perceptual apprehension of surface qualities." But side by side with this doctrine, another also thrives. And we are assured, by this same modernity, that art reveals reality. Art penetrates beneath the appearance of things to their abiding essence. The artist has a vision of what really is, and in his work the veil of Becoming is stripped away, the realm of Being is disclosed.

The contradiction between these two sets of views is obvious. It is a contradiction which lies at the heart of our aesthetic thinking, and effectively contaminates all theoretic attempts to furnish a coherent

explanation of art and a substantial basis for criticism. Under the sway of this systematic uncertainty, our art is without a tradition and our criticism can be only impressionistic. If aesthetic theory is to exert a healthy influence upon artists and critics by establishing a flexible and meaningful system of artistic values, the fundamental need is for a satisfactory doctrine of the aesthetic object, in order to remove the present ambiguity which produces so many confusions and excuses so many heresies. The necessary first step toward this end is an historical step in the direction of the past: if we are to appreciate the position in which we now find ourselves, we must understand how we arrived at this position. Since we are unable to solve such a persistent and fundamental problem as that of the object of art, an obvious question arises: *Why* are we unable to solve it? And since the problem has received satisfactory solutions in the past, we are forced to the general conclusion that there must be some factors peculiar to the modern climate of opinion which prevent our solving it. That is, there must be some of our terms of thought, some of our basic concepts and theories, which make it difficult for us to explain the nature of the aesthetic object, and so hinder us in our efforts to give a coherent account of art and beauty. It is with the intention of discovering these inhibiting factors, of seeing just why and how our aesthetic difficulties have arisen, that this essay has been written. It hopes only to clarify present uncertainties by pointing out the doctrines responsible for them, and thus to prepare the way for future reconstruction by exposing the weaknesses inherent in actual theory. In order to do this, it seeks to exhibit the source of our aesthetic concepts, and the dilemma which inevitably results when these concepts are used as principles of explanation. In short, this essay is essentially an attempt to understand and evaluate contemporary aesthetic ideas by inquiring into the history of their origin and operation.

For the purposes of such an inquiry, Taine is a person of tremendous historical significance because he was the first aesthetician who fully and openly accepted the metaphysical outlook of nineteenth century scientific thought. Taine attempts, for the first time, the construction of an aesthetic theory upon the basis of the empirical, materialistic, and nominalistic postulates of physical science. These postulates, along with the detailed theory that follows from them, are acknowledged by Taine to constitute an adequate and accurate description of reality; and the task of aesthetics is to give an explanation of art and beauty that will be consonant with this scientific conception of nature and human nature. In Taine, then, we encounter the first conscious and well-equipped exponent of an aesthetic patterned in accord with the world-view that is now generally accepted; and Taine's theory stands as the earliest attempt to solve aesthetic problems by means of the same postulates and within the same conceptual framework that we still use.

The natural consequence of this is that Taine is the source from which have derived many of the modes of thought that pervade contemporary aesthetics. It is in the work of Taine that there is introduced onto the stage of thought a new set of terms in which aesthetic



explanations are to be cast, and a new set of elements to which aesthetic facts are to be reduced; and these concepts to which Taine had recourse in defining and solving aesthetic problems have been dominant ever since. In short, Taine is the corner where theory turns from the ideas and vocabulary of imitation to those of expression.

Since this is the historical position of Taine, an examination of his work should reveal the answers to two pertinent questions: *First*, why does there occur this change in our modes of aesthetic thought? As I have argued in another paper,<sup>1</sup> I think that this shift is dictated by the general metaphysical shift from idealism to positivism, and I shall here do no more than illustrate this in Taine. *Second*, and more important, just what happens when you attempt to account for the facts of art, of aesthetic experience, and of artistic creation on the basis of these metaphysical and epistemological postulates? This central question with which I am concerned can be briefly stated: Is this new explanation satisfactory, and if not, why not?

### METAPHYSICAL BASIS OF TAINÉ'S AESTHETICS

To understand fully the origin and content of Taine's aesthetic theory, it is necessary first to discover the exact metaphysical basis upon which this theory is erected. This always important question of metaphysical assumptions and implied postulates is the more important in the case of Taine, for he was consciously constructing his aesthetics in accord with his metaphysics, and so had clearly before his mind the framework within which aesthetic facts must be interpreted and into which they must be made to fit. This metaphysical framework that Taine accepts as ultimate is that of positivism. Taine conceives nature as completely materialistic and mechanistic. Reality is merely matter following certain laws, and so of necessity behaving according to a fixed pattern and producing various objects and events as a result of this behavior; and these laws or fixed patterns of behavior are themselves only functions of the composition of matter and the relations between various parts of it. Taine also accepts unequivocally the epistemological consequences of this monistic and nominalistic doctrine: the physico-mathematical description of nature is final and complete; reality is exhausted when it is explained in these terms, and what cannot be so explained is not a part of reality.

The two important facts here are Taine's explicit acceptance of this metaphysics as defining the terms in which all phenomena must be interpreted, and his realization that such a step constitutes a break with the past. And these facts can be best established and clarified in the words of Taine himself. Thus, in his most theoretical work, *De l'Intelligence*, he states his position in these terms:

With the destruction of this metaphysical phantom [the concept of *faculties* or *powers*] there disappears one of the last surviving leaders of that army of verbal entities which had formerly invaded all departments of nature, and which, in the past three centuries, have been one by one destroyed by scientific progress. Today, there remain but two of them: the self, and matter.

<sup>1</sup> Iredell Jenkins, "Imitation and Expression in Art," *Journal of Aesthetics and Art Criticism*, Summer, 1942.

Formerly, they were legion. Throughout the period when the scholastic philosophy was dominant, whether this influence was avowed or dissimulated, there was posited, underlying natural events, a vast horde of chemical beings: vital principle, vegetative soul, substantial form, occult qualities, plastic forces, specific virtues, affinities, appetites, energies, archetypes; in brief, a whole realm of mysterious agents, distinct from matter but connected with matter, and regarded as indispensable to an explanation of material transformations. Little by little these have disappeared, denied or disproved by experience<sup>2</sup>. . . . Thus, in the physical world, as in the realm of morals, there now remains nothing of what is commonly understood by substance or force. There remain only events, with the conditions of these events and the connections between them; some of these are moral, or conceived as characterized by sensation, some are physical, or conceived as characterized by movement. The concept of *fact* or *event* alone corresponds to that which is real.<sup>3</sup>

Elsewhere, in a review of one of Thomas Ribot's works, *L'Hérédité*, Taine speaks yet more succinctly and forcefully:

One can no longer discuss seriously in philosophy the question of substances; attention is now solely occupied with phenomena, that is, with facts or events. I even venture to say that there is nothing else in nature. At all events, in the opinion of the most eminent contemporary thinkers, there is nothing else that is within the reach of knowledge.<sup>4</sup>

Taine thus makes it abundantly evident that he accepts consciously and unequivocally the positivistic view that material reality is exhaustively described by science, and that there is no immaterial or spiritual realm. Further, he quite clearly recognizes that in accepting this interpretation he is purposefully surrendering and denying the dualistic metaphysics which had so long reigned supreme.<sup>5</sup> Taine regards this dualism of matter and form, of phenomena and noumena, of object and essence, as outmoded and inadequate, and he openly repudiated it, and the epistemology that goes with it, in favor of materialism and empiricism. Taine expresses his conception of and attitude toward the two philosophies in a few sentences:

During the past fifty years, philosophy in France has been reduced to the status of a literary exercise or a mere subject to be studied in our colleges. During this same period, philosophical inquiry in Germany developed several vast speculative systems, and in England it returned to the tried and true method, so long abandoned, of induction and a reliance upon experience.

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<sup>2</sup> Hippolyte Taine, *De l'Intelligence* (Paris: 1st ed., 1870; 15th ed., 1923), T. 1, pp. 346-347. The translations from Taine are in all cases by the present author.

<sup>3</sup> *Ibid.*, pp. 349-350. The italics are Taine's.

<sup>4</sup> Hippolyte Taine, *Derniers Essais de Critique et d'Histoire* (Paris: 6th ed., 1923), p. 186. The article appeared originally in the *Journal des Débats* (Nov. 23, 1873).

<sup>5</sup> It should be noted that Taine does not, in this criticism, make any distinction between the metaphysical doctrines of mediaeval scholasticism and those of post-Kantian idealism. He evidently regards the latter as the *direct* lineal descendant of the former, and essentially identical with it; that is, he forgets that Descartes intervened! Thus, criticism which may be valid now of one of these schools, now of the other, he applies to both of them indifferently. He seems concerned with them only in so far as he thinks they are both dualistic, spiritualistic, rationalistic; that is, so far as they distinguish between *being* and *becoming*. It is this tendency that he denies and attacks.



Today, English philosophy reigns supreme in the intellectual world, and the German systematizations retain only an historical interest. But this is still a vivid interest; and among these punctured bubbles of thought, which are now falling to earth, that of Schopenhaur is the latest and the most brilliant. French thought can profitably pause to examine this vast, ingenious, and now-deflated intellectual construction, before turning to the more limited but more solid work which is now the center of our rational hopes and efforts.<sup>6</sup>

These are, then, the metaphysical principles which lie at the base of Taine's thought, and which define the elements in terms of which must be interpreted and explained all the facts of nature and human nature. Essentially, this position can be reduced to two postulates. First, there are only phenomena—*faits ou événements*—that are real and can be known. Second, the description and explanation of these phenomena given by the natural or physical sciences is complete and final. The significance of these postulates used as explanatory principles resides largely in what they deny; that is, in the restrictions that they place upon both the extent and the method of human knowledge. There are two important negations entailed in these postulates: First, it is denied that there is any hidden, ideal, super-natural realm that lies behind the phenomenal world and causes it. Thus, discourse is limited to physical things and the relationships between them, since there is nothing else to be the subject of discourse. Second, it is denied that science requires, or even allows itself, to be supplemented and completed by any other discipline or inquiry. Thus, the knowledge-function and the truth-value are reserved to scientific method and scientific findings, and all extra-scientific investigations and reports of reality are declared to be fraudulent pretensions.

It is within the context of these ideas that Taine must explain the phenomena of art; assuming reality and knowledge to be of this kind, some account must be given for the very obvious and important fact that works of art are created and appreciated. This Taine attempts to do, and it is this attempt which interests us.<sup>7</sup>

#### ART AS IMITATION

The concept which is central in Taine's aesthetics, and which serves as the first and principal subject of inquiry, is the concept of art. Taine's approach is completely objective. He feels no compulsion to conduct any prior investigation into the aesthetic experience, by which art is recognized and identified; nor into the psychology of artistic

<sup>6</sup> *Ibid.*, pp. 194-195. The article appeared originally in the *Journal des Débats* (March 4, 1874).

<sup>7</sup> That the work of Taine was essentially an effort to interpret all phenomena upon the basis of Positivism has been recognized and maintained by all of the philosophical expositors of Taine's work. They have been equally of accord that Taine failed in this task, in the sense that he frequently had recourse to ideas, introduced surreptitiously, which carried him beyond the doctrines of Positivism. The occurrence of this in Taine's aesthetics is exhibited in detail in the body of this article. For this general position and criticism, cf. especially the following: J. Benrubi, *Les Sources et les Courants de la Philosophie Contemporaine en France* (Paris: 1923), t. 1, pp. 25-34; D. Parodi, *La Philosophie Contemporaine en France* (Paris: 1920), pp. 26-27; L. Levy-Bruhl, *History of Modern Philosophy in France* (Chicago and London: 1924), pp. 421-435; L. Brunschvicq, *L'Expérience Humaine et la Causalité Physique* (Paris: 1922), pp. 316-317, 463-464.

production, by which art is brought into being. He accepts the position that works of art exist, as positive and observable facts, arranged in museums and libraries; and the function of aesthetics is to examine these facts in order to discover and exhibit their essential character.

The most obvious common characteristic disclosed by such an analysis is that art is imitative; the essential character of works of art lies in the fact that they are all imitations.<sup>8</sup> The recognition and acceptance of this "imitativeness" as the defining characteristic of art constitutes Taine's basic position, and serves as the point of departure for further inquiry. But the full significance of this position needs to be established, before passing on to the details of the theory erected upon it. The adoption of the imitation-postulate is of primary significance because it fixes the terms in which art must be defined and explained, and the elements to which artistic and aesthetic phenomena must be reduced. And the striking fact in this connection is that Taine was the last aesthetician to think of art in these terms, and to define art in this way; from his time on, art has been made to repose upon other foundations, and the reasons for this change will appear later. For the present, our concern is to determine why Taine interpreted art in these terms; and the only plausible answer is that in so doing he was merely stating a commonplace of his aesthetic environment. This was the view of art inherited from an older philosophical tradition, and Taine accepted it as self-evident without examining or justifying it, other than through a simple appeal to fact,<sup>9</sup> and especially without realizing the difficulties in which it involved him. At all events it is quite clear that the aesthetic postulates with which Taine works are those of the imitation or revelatory theory of art; the work of art is an imitation; the artist, in creating, grasps and depicts the nature of reality; and in aesthetic experience we are made aware of the reality that is represented. These are the concepts in which Taine envisages art, and the terms in which he must explain its phenomena.<sup>10</sup>

Taine's basic postulate, then, that art is imitative determines the direction of his inquiry. From now on, in the elaboration of his theory, the problem with which he grapples is that of reconciling this artistic postulate of the old realism with the metaphysical postulate of the new nominalism. The reality that art imitates must be designated and described, and it must be a reality that is recognized by the philosophy of positivism and materialism. The importance and significance of art must be justified, and the scientific picture of nature must be adhered to.

<sup>8</sup> Taine, *Philosophie de l'Art* (Paris: 19th ed., 1924), t. 1, pp. 14-15.

<sup>9</sup> "... among the five great arts, which are poetry, sculpture, painting, architecture, and music, let us neglect for the moment the last two, of which the explanation is more difficult; we will turn to them shortly. Let us now consider only the first three. They all share, as you can see, a common character: they are all, to a greater or a lesser degree, arts of *imitation*." *Ibid.*

<sup>10</sup> I do not mean to deny, though I am here neglecting, the importance of Taine's famous doctrine of "*la mode, le moment, et le milieu*." This contributes a real understanding to particular works of art. But Taine himself clearly regards these influences as only *contributing* factors, and the "real" thing, the "real laws" of human character and behavior, remain the object of the artist's search. Cf. especially *Philosophie de l'Art*, pt. 1, c. 2, and pt. 5, c. 2.



The development of Taine's theory as it seeks to perform this task consists simply in the elaboration of an answer to the question: What is art an imitation of? And the technique employed is that of a series of steps, each of which negatively refines the concept of art by casting aside those unessential features which are *not* the object of artistic imitation, until its proper object is finally disclosed. The most immediately obvious answer to the question is that a work of art imitates a particular real thing or a particular real event. Since only concrete physical things and phenomenal events are real, this would mean that artists do and should imitate as closely as possible what is and what happens in nature. And the conclusion would seem to be, as Taine states it, "The whole character of art is to be found in exact and complete imitation."<sup>11</sup> But artists very obviously do not do this. And when this is done, the result is not a great work of art. If exact imitation of phenomena were the end of art, then the greatest works of art would be photographs, casts, and stenographic reports.<sup>12</sup> Experience shows that this is not the case. So art must imitate something other than phenomena as these exist and behave.

But since only phenomena are, since only physical particulars exist, what else is there for art to imitate? To save the facts, theory must further define the act of imitation by delimiting its object; and this must be done without an appeal beyond the context recognized by positivism. That is, the operation must be one of refinement, not of addition. Taine recognizes the problem, and solves it in these terms:

It is, then, necessary to imitate very closely some part of an object, but not all of this object. We must now distinguish and designate what it is that art seeks to imitate. And I immediately suggest this answer: The mutual relations and connections between the parts. . . . You have before you a living model. . . . That which is expected of you, as an artist, is to reproduce the *relations*; and first of all, the proportions, or relations of size. Then, it is further expected of you to reproduce the forms, or relations of position. . . . In brief, it is necessary to reproduce the system of relations by which the parts are connected, and nothing else. It is not the simple physical appearance of which you must exhibit, but only the logic of the object. . . . Similarly, you have before you human actions. . . . Here, as before, you are expected to clarify the proportions, connections, and relations. . . . In sum, in literature as in painting, you should exhibit not the exterior and perceptual qualities of objects and events, but their systematic relations and connections; that is, their logic.<sup>13</sup>

Art, then, is an imitation, not of the simple external appearances of things, but of something which lies behind these appearances and is responsible for them. Art is not content to describe the mere *what* of phenomena, but seeks rather to explain the *why* of these phenomena. The artist must regard the physical appearance of things, and the overt behavior of persons, as having the status of effects; the proper

<sup>11</sup> *Philosophie de l'Art*, t. 1, p. 22.

<sup>12</sup> *Ibid.*, pp. 23-25. These examples have become classic, and are always referred to by the expressionist school to show, by *reductio ad absurdum*, that art is *not* imitation.

<sup>13</sup> *Ibid.*, pp. 27-29.

business of the artist is to search out and make manifest the hidden causes which produce and so explain these effects. Taine sums up this conception of art thus briefly: "Thus, as a general rule, that which interests us in any real thing, and that which we expect the artist to discover and exhibit, is the logic of this thing, whether the logic of its form or the logic of its character; in other words, its structure, its composition, and its mode of behaving."<sup>14</sup>

There remains but one step for Taine to take to complete his purely descriptive account of the nature of art: this is to elucidate what he means by the "logic" of a thing, as distinguished from its appearance and behavior, and so to state exactly what it is that art imitates and represents. Taine approaches this question by pointing out that the greatest art always contains a distortion of physical fact; the graphic arts do not copy the actual structure of the objects they imitate, and the literary arts do not give an accurate report of the events they explain. An artistic representation always alters the relationships that it finds in nature, and if we can discover why this distortion is practiced we will be able to say what it is that art seeks to reveal.

Taine solves this problem immediately and unhesitatingly, and he solves it in the terms of the older tradition; he simply reiterates the theory that art purposefully distorts phenomenal objects and events in order to reveal the realities underlying these. That is, art is explained by being referred to something which is responsible for physical things, but which is not apparent in physical things; and hence the otherwise puzzling fact that the artist *imitates*, but does not *copy*. Taine, following his usual empirical procedure, introduces this discussion by a consideration of two particular works of art, Michelangelo's Medici tomb in Florence and Rubens' painting, *The Kermesse*; and he states his conclusions in this passage, of capital importance:

These two examples show us that the artist, in modifying the relations of the parts, modifies these intentionally and always for the same purpose: to make evident to us a certain *essential character* of the object, and, consequently, the central conception that he has of this object. Notice this word, gentlemen. This character is what the philosophers call the *essence* of a thing; and they therefore say that the final end of art is to exhibit the essence of things. We will ignore this word *essence*, which is a technical term, and will say simply that the purpose of art is to exhibit the central character, some notable and valuable quality, an important point of view, some principal aspect of the object.

We here touch upon the true definition of art, and we have need of complete clarity; for this, we must note precisely and definitely what we mean by an essential character. I define it thus: *a quality from which all, or at least many, of the other characters derive according to certain fixed connections.*<sup>15</sup>

This passage not only contains the heart of Taine's aesthetic theory, but also reveals the central difficulty which demands a solution and leads on to the doctrines of expressionism; so we must

<sup>14</sup> *Ibid.*, p. 29.

<sup>15</sup> *Ibid.*, p. 33.



attempt to interpret it carefully. For this purpose, the most significant feature of the passage is the rather sudden break in the first paragraph, where Taine attempts to distinguish between *essence* and *caractère essentiel*. From the way Taine expresses himself throughout this discussion, there is no doubt of what he wants to say and mean about art: that art is an imitation of essences or forms, and that its value resides in the fact that it reveals to us a realm to which we would otherwise be blind. That is, the artist grasps the real form or idea that lies behind and is hidden in phenomena, and he then exhibits this form in such a way as to make it clear and manifest. This view is quite explicitly stated in the following passage, where Taine explains the necessity for art:

The purpose of art is to expose and exhibit clearly this essential character, and art undertakes this task because nature does not perform it adequately. For, in nature, this character is only dominant (*dominant*); art seeks to make it dominating (*dominateur*). This character fashions real objects, but it does not fashion them perfectly. It is balked in its activities, hindered by the intervention of other causes and factors. It has not been able to realize and reveal itself sufficiently and completely in the objects which bear its mark. Man feels this inadequacy, and it is in order to repair it that he invents art.<sup>16</sup> . . . Thus, the function of a work of art is to reveal the essential character, or at least some important character, of the object, and to make this as dominating and as visible as possible. To this end, the artist omits any traits of the object which hide this character, chooses those which are direct manifestations of it, corrects those in which it is altered, retouches those in which it is not evident.<sup>17</sup>

The implications of this doctrine are obvious and immediate. Taine is here saying that phenomenal objects are manifestations of certain real forms; they manifest these forms only imperfectly, because of the intervention of matter; and the function of the artist is to grasp the form inherent in the object and reveal it to us in his art. Thus, the metaphysic demanded by Taine's account of art is the metaphysic of realism. Apparently, Taine has been thinking of art in these terms all along, without realizing it; when he does quite suddenly become conscious of this fact, he also sees clearly that something must be done about it. And so there occurs the break already referred to in the paragraph quoted above, where Taine very clearly and emphatically states his abandonment of this traditional explanation of art. It is as though he saw the misunderstanding that might easily arise, and goes out of his way to obviate it; hence his distinction between *essence* and *caractère essentiel*, the contemptuous manner in which he dismisses the concept of "essences", his insistence that art imitates only "essential characters," and his doctrine of art as the translation of the *dominant* into the *dominateur*. All of this is necessitated because there is no formal or ideal realm of essences such as art seems and pretends to reveal, and the artist cannot serve the function usually ascribed to him. In short, Taine here recognizes that his *description* of art implies, as an *explanation*, a metaphysic that he has already explicitly denied; so this implication must be rejected, and a new explanation must be found.

<sup>16</sup> *Ibid.*, p. 37.

<sup>17</sup> *Ibid.*, p. 39.

It is just at this point that the crucial problem of Taine's aesthetics emerges; the stage is set, the dramatic situation has been prepared, and the conflict of ideas can no longer be restrained. So let us sum up the scene briefly. We have, on the one hand, Taine recognizing that art is experienced or felt as a report of reality; art seems to give us an acquaintance with and an understanding of the true character of objects and actions, and artists aver that they are describing what they have found to be the real factors in nature. And we have, on the other hand, Taine accepting a metaphysics which says that only physical particulars are real, and that the scientific account of nature is accurate and complete. Now, when it is borne in mind that the artistic and scientific descriptions of nature are quite radically dissimilar, it is evident that conflict between these two ideas must arise, and that Taine, as holding them both, must face a dilemma. If he maintains consistently that science gives an exhaustive report of reality, then the problem is to discover the proper function and value of art. If he continues to ascribe a cognitive and revelatory character to art, then the problem is to do this without positing entities that he has already denied. In brief, the question is this: How can you justify the felt significance of art without doing violence to the postulates of physical nominalism?

Taine himself makes two attempts to achieve this reconciliation, and to bring the claims of experience into accord with the demands of theory. One of these consists simply in a reinterpretation of the traditional revelatory doctrine; art is here still accepted and defined as primarily an imitation, and the old theory is corrected only by a redesignation of the reality that is imitated. This is no longer conceived as a separate non-material realm; it is, as it must be, the phenomenal world. Specifically, it is "the permanent and generative causes of things", the "fundamental laws" that control phenomena.<sup>18</sup> The object grasped by art is thus the same as that grasped by science; they both talk about the same thing; they both have the purpose of telling us what material reality is really like, stripped of its unessential and accidental features. The sole difference between the two resides in the different languages that they speak; the different techniques that they employ. They are but two translations of the same subject-matter: science translates reality into "abstract terms" and "exact formulae"; art translates this same reality "in a sensible manner, and by addressing itself not only to the reason, but also to the senses and to the heart of even the most ordinary man. Art has this particularity, that it is both *superior* and *popular*; it makes manifest that which is the most elevated, and it makes this manifest to everyone."<sup>19</sup>

#### ART AS EXPRESSION

The difficulties and inadequacies inherent in this view are apparent, and Taine must have been aware of them even before anyone pointed them out, for he nowhere develops this thesis beyond the brief statement here cited. Instead, Taine deserts this theory for another and

<sup>18</sup> *Ibid.*, p. 48.

<sup>19</sup> *Ibid.*, p. 48.



quite a different explanation of the nature and function of art. This explanation is of immense importance as the precursor and the first occurrence of future aesthetics, so we should try to understand its exact origin. Taine does not explicitly surrender or deny his first doctrine; he simply ignores it. It is as though he realized, without clearly seeing why, that art could no longer be anchored in reality, and could no longer be conceived and defined as an imitation. So he seeks, in an apparently vague and instinctive manner, to anchor art somewhere else, and to discover some new set of terms in which to explain it. Taine is aware, from having made the attempt, that when you adopt a materialistic and nominalistic metaphysic, and then also define art as an imitation, you encounter difficulties in stating what art imitates; when you try to reduce works of art to the reality they reveal, you find yourself becoming continually more ambiguous and uncertain. So the obvious thing to do is to define art in some other general terms, and to reduce works of art to some other set of causes, or explanatory principles.

The explanation that Taine thus develops is a brief but thoroughly coherent statement of the doctrine that art is expression. Here again it is necessary to emphasize the fact that Taine does not openly say—and perhaps does not even realize—that it is necessary to define art in new terms and to reduce it to new elements; he does not pass judgment on the theory of imitation and declare it to be inadequate and inconvenient. But from now on, Taine casts his explanations in another set of terms; in describing and accounting for works of art, he refers these not to the reality they imitate, but to the human spirit that has created them and the “moral temperature” in which this creation takes place. It is in these terms that Taine explains the production of works of art in general, or the artistic process, and it is this language that he speaks throughout his discussions of the various artistic schools of the past. He relapses occasionally into the doctrine of imitation, but for the most part he explains artistic works from an altogether different point of view.

The essence of this new position is that art is described and explained primarily in terms of its creator, rather than in terms of the object it represents. The work of art is conceived to be a creation, rather than a revelation; and the cause to which the work is to be referred for understanding is the artist rather than the model. What we have here, of course, is a shift in the entire aesthetic frame of reference; aesthetics now adopts the postulate that “art is expression”, and states that these are the terms in which definition and explanation must be cast. So now the task of general aesthetic theory is to elucidate the concept of expression, while the task of artistic criticism is to explain all particular works of art as expressions of the human spirit under various conditions.

Taine first introduces these modes of thought or explanatory principles in a quite incidental manner, and while considering a particular work of art. In the discussion already referred to of Michelangelo's Medici tomb, Taine has this to say, in explanation of its colossal and distorted figures:

It is within his own heart and spirit that Michelangelo found these figures.

They could have been created by none but a lonely and meditative man, and one enamoured of justice. They sprang from a passionate and generous soul, lost in a world of corrupt and selfish men, surrounded by oppression and cruelty, faced with the dreadful triumph of tyranny and injustice, wandering amidst the ruins of his country and his liberty. Threatened with death, knowing that his life hung by a thread which might break at any moment, he was yet incapable of resigning himself and complying; and so he sought refuge in his art, through which, under the imposed silence of his slavery, he could voice the despair that lay upon his heart. And upon the pedestal of his sleeping figure he wrote these words: "To sleep is good, and better still to be of stone, while misery and shame survive. To see nought, to feel nought—that is now to be happy. So wake me not. Speak softly!" That is the feeling of which these forms are the revelation. To give expression to it, he has altered the usual proportions: lengthened the trunk and the limbs, twisted the torso upon the haunches, hollowed the eyes, furrowed the brow with wrinkles comparable to the frown of a lion, enlarged the shoulder into a mountain of muscle, made of the spine a mass of tendons and vertebrae cramped upon one another, like a chain stretched to the breaking point with its links on the verge of parting.<sup>20</sup>

Amazingly enough, Taine seems not to realize the novel and important theoretical implications of this consideration of a particular case; for he now proceeds to his statement of the doctrine that art is the imitation of essential characters. He develops this theory for some pages, cites several specific cases, and sums up the whole discussion by saying that this is the definitive explanation of art. Then he turns from works of art to an examination of artists and the creative process, in order to confirm the already elaborated theory of imitation; and in so doing, he announces an altogether new and different theory! The doctrine of imitation, far from being confirmed, is ignored; and Taine now gives a general statement of the principles already employed concretely in the discussion of Michelangelo, and to be employed almost exclusively in future discussions.

There is one faculty which is indispensable to artists; no amount of study, no matter of patience, can take its place; if it is wanting in them, they remain only copyists and workmen. In the presence of things, they must feel an *unique emotion (sensation originale)*; some character of the object strikes them, and the effect of this shock is a vivid and precise impression. In other works, when a man has talent, his perceptions—at least those of a certain type—are delicate and lively; with a rare and alert discernment, he seizes and distinguishes nuances and relationships . . . ; by this faculty, he penetrates to the interior of objects, and seems more perspicacious than other men. And this sensation is too personal and too vivid to remain inactive: the entire nervous and intellectual mechanism is aroused by it. Involuntarily the man expresses his impression: his body makes a gesture, his attitude becomes imitative, and he feels constrained to recreate externally the object as he has conceived it . . . it is apparent that the mind, aroused by the power of the primitive stimulus, has reacted to and transformed the object, now in such a way as to enlarge and illuminate it, now in such a way as to distort it grotesquely and willfully. As well in a bold sketch as in a vicious caricature, you recognize at once that poetic temperaments are under the dominance of this involuntary impression . . . ; everywhere you find the same inner procedure. To pay homage to it, to call it inspiration or genius, is altogether right and proper; but if you wish to define it precisely, you must always recognize in it a vivid and spontaneous sensation, which gathers around itself a galaxy of subsidiary ideas, remaking these ideas, changing them, transforming them, and using them as means through which to manifest itself.<sup>21</sup>

<sup>20</sup> *Ibid.*, pp. 30-31.

<sup>21</sup> *Ibid.*, pp. 39-41.



## CRUCIAL PROBLEMS IN TAINE'S POSITION

This brief statement could serve admirably as the credo of modern aesthetics. It contains all of the basic ideas and attitudes that constitute the "I believe" of contemporary expositors of art; it introduces the elements which are now to be accepted as ultimate—the "atoms and the void" of artistic phenomena; and so it defines the terms in which thought is now to move and in which explanations are to be cast. The primary historical value of these doctrines, as they appear in Taine, lies in the fact that here, in their first announcement, we can see quite clearly *why* they arise and *what* they lead to. With respect to the first point, it is here, as nowhere else, made manifest why art must now be interpreted as an expression of the human spirit rather than as an imitation of reality; it here becomes apparent why the insistent plaint is raised that beauty is an intrinsic value, that art does not posit the reality of its object, and that aesthetic experience is concerned with surface qualities. As we have seen, Taine and his successors are forced to this position because there remains nothing beyond the artist and his work to which art can be referred. The new metaphysics deprived art of any substantial basis in reality, and so the necessity arises to ground art in the artist, who is the only foster-parent available.

With respect to the second point, the work of Taine also exhibits quite openly the fact that the conclusions to which the new theory inevitably leads are inadequate and unsatisfactory. For an amazing reversal here takes place, and Taine, having been driven from the doctrine of imitation to that of expression by his metaphysical theory, is now driven back from the principles of expressionism to those of imitation by the body of aesthetic and artistic fact. This act of reversal is quite sudden *when it occurs*, but it is delayed for some time, and then appears as the culmination of a lengthy procedure of which the essential features can be briefly summarized. Once Taine has set forth the general principles of the expressionistic theory, it is chiefly in terms of them that he describes, explains, and criticizes artistic works; he has recourse occasionally to the doctrine of imitation, but throughout the historical sections of the *Philosophie de l'Art* works of art are explained for the most part by being referred to the artist himself and to the "moral temperature" in which he works. Both theories are employed, but so long as it is simply a question of accounting for the particular character of various schools and various works Taine relies primarily upon his new principles.

With the concluding section of the work, the chapter entitled "De l'Idéal dans l'Art," there comes a drastic change in this procedure. For now Taine returns to a consideration of art in general, and particularly to the subject of critical evaluations in art; and immediately various uncertainties and inadequacies involved in the expressionistic theory manifest themselves, and Taine reintroduces the doctrine of imitation that he first developed and then ignored. This section opens with a restatement of his original imitative definition of art, but there is here appended to this a codicil which virtually transforms it into an expressionistic definition.

We have said that the function of art is to exhibit some essential or salient character more fully and more clearly than it is found in real objects. To this end, the artist forms an idea of this character, and then transforms the real object to accord with his idea. The object thus transformed is said to *conform to the idea*, or to be *ideal*. Thus, objects pass from the real to the ideal when the artist, in reproducing them, modifies them after the pattern of his idea; and he changes objects in this way when, having discovered and recognized in them some notable character, he alters systematically the natural relations of their parts in order to render this character more visible and more dominating.<sup>22</sup>

Apparently, as soon as Taine states this definition he realizes the embarrassing questions that it raises and the unpleasant consequences that result from it. He seems to see at once that if this is the final word on art, if this is what art really is, then criticism and evaluation are impossible, and the artist is justified in producing whatever he chooses and insisting that it is great art. For Taine continues in these terms:

Among the ideas that artists reveal in their work, are there any which are superior? Is it possible to isolate any one character which is better than others? Does there exist, for each object, one ideal form, any departure from which is a deviation and an error? Can we discover any principle of subordination by which to assign relative positions to the various works of art?

At first glance, we are tempted to say, "no". The definition that we have accepted would seem to deny the validity of this research; for this definition must lead to the belief that all works of art are of an equal value, and that the whole field of art is subject only to arbitrary judgments. In effect, if an object becomes ideal simply by conforming to an idea, the idea is of little importance; the artist can choose one at random, according to his taste, and we can have no criticism to make of his choice. The same subject can be equally well treated in any manner whatsoever.<sup>23</sup>

It would certainly seem that Taine is correct in these conclusions; such expressionism must logically lead to a "solipsism of the creative moment"; and this must in turn deny to aesthetic theory the right to erect any standards, and thus make it impossible for criticism to give any helpful advice to either the creator or the appreciator of art. So Taine denies these conclusions as soon as he recognizes them; and after commenting for several pages on the diversity of art, and the apparent absence of any standards or any order within it, he abruptly takes the opposite stand!

And yet, in the realm of imagination as well as in the real world, there are different levels because there are different values. Both connoisseurs and the general public esteem these values and so assign these ranks. We have constantly, at each step of our argument, passed such judgments. Other men do the same, and in criticism as elsewhere there are some recognized truths. Following this method, we have been able to approve or disapprove a certain artist, to praise some parts and to condemn others in the same work, to establish values, to indicate progress and deviations, to recognize some periods when art flourished and some when it became degenerate; and we have been able to do this, not arbitrarily, but in accord with a common rule.<sup>24</sup>

<sup>22</sup> *Op. cit.*, t. 2, p. 224.

<sup>23</sup> *Ibid.*, p. 225.

<sup>24</sup> *Ibid.*, pp. 234 and 236.

It is perfectly obvious that all of these activities are unjustifiable within the limits of Taine's expressionistic conception of art, and Taine himself already admitted this. For criticism of this sort, criticism which "establishes values" and "indicates progress", demands the existence of real objective standards—"une règle commune"; and the question at once arises as to what these standards are and how they can be established. Having recognized the inadequacy of his expressionistic theory to meet these demands, Taine promptly returns to his original definition of art as imitation, and solves the problem briefly in these terms:

To depict a notable character in such a way as to make it dominating: that is the function of a work of art. Therefore, . . . the character depicted should be the most notable possible, and it should be made as dominating as possible.<sup>25</sup>

The familiar details of the critical dogmas erected upon this foundation are not essential to the present discussion, and need not detain us; what is important is the fact that the foundation itself marks a complete return to the traditional theory that art is an imitation of reality. The critical doctrine to which Taine now finally subscribes as the only satisfactory one contains a double standard for the judgment of art; it states that the value of a work of art depends partly upon the value of that which is imitated, and partly upon the clarity with which this is revealed. Both of these standards, to be valid, demand that art be conceived as the manifestation of an essential character in the real world. Then, since these characters themselves differ in value, works of art will be more or less great as they imitate characters which are more or less "importants et bienfaisants."<sup>26</sup> And further, since these characters are hidden and disguised in particulars, works of art will be more or less beautiful as they succeed in revealing the character more or less completely. Taine is forced to ground art in reality; and he does this quite openly, forgetting his past renunciation, and ignoring now the expressionistic principles he has so long employed. This return from the "artist's idea" to the "real character" can be exhibited quite briefly:

The concordance is thus seen to be complete, and the characters carry over into the work of art the value that they have in nature. According to the greater or less value that they possess by themselves, they communicate to the work a similar degree of value.<sup>27</sup>

And in summing up the final conclusions of his philosophy of art, Taine has this to say:

We have postulated . . . that the work of art is a system of parts, . . . and that the function of art is to exhibit, by this system, some notable character. From this we have concluded that the work of art will possess more value as the character it depicts is itself more notable and is exhibited as more dominating. And we have distinguished two factors which determine a character as more or less notable; first, its degree of importance; that is, the extent to which it is stable and fundamental; second, the degree of its beneficence; that is, the extent to which it contributes to the conservation

<sup>25</sup> *Ibid.*, p. 237.

<sup>26</sup> *Ibid.*, 5 ième partie, cc. 1-3.

<sup>27</sup> *Ibid.*, p. 281.



and development of the individual and the group that possess it. . . . We have further sought to determine how this character can manifest itself more clearly in a work of art than in nature, and we have seen that it stands out more strongly when the artist, using all of the elements of his art, makes all of their effects converge on this one point. . . . The masterpiece is that work in which the greatest force receives the fullest development.<sup>28</sup>

It is thus made abundantly evident that Taine is unable to reconcile successfully his metaphysics and his aesthetics. From his original position, which apparently states the findings of experience, and which defines art as an imitation, he is driven by his metaphysics to a position which defines art as expression. But this doctrine, though certainly useful and valuable in many ways, Taine ultimately finds unsatisfactory because it does not account for the effects of art, and because it cannot furnish any standards for the criticism of art. It fails here because it must refuse to answer the question: What is art about? It seeks to avoid this question by defining art as an expression, rather than as an imitation. But the question remains: Expression of what? As an appreciator, he feels that art makes significant statements about something objective; but as a theoretician, his metaphysics prevents him from identifying positively this something, and so denies him the explanation that he so acutely needs.

The net result of this, as might be expected, and as we have seen, is that Taine deserts the doctrine that consistency would demand. Rather than accept this position, he contradicts himself, and both asserts and denies that art imitates reality. The dilemma with which Taine is faced is implacable. He knows that he cannot coherently explain art by referring it to scientific reality. He feels that he cannot satisfactorily explain art without referring it to some reality. And so, since he accepts scientific reality as exhaustive, he is put in the uncomfortable position of asserting that art does what he knows it cannot do. He vacillates between the valid but untenable doctrine of expression, and the tenable but invalid doctrine of imitation.

This same dilemma has, of course, been inherited by modern thought, and a great part of contemporary aesthetics solves it in much the same fashion as Taine. Expressionism is adopted as the official and avowed theory of art; but at some point the ideas of expressionism are deserted, and art is defined as an imitation, and is explained by being referred to an objective realm which it alone can disclose. To be thus forced to say at one moment that art has no meaning, and to say at the next that it reveals reality, is obviously unhealthy. Either these metaphysical and epistemological postulates of nominalism should be denied on the basis of aesthetic fact, or these facts should be denied on the basis of theory. And the persistent homage paid to the facts would seem to suggest that perhaps it is the theory which needs, if not denial, at least some corrections and additions.

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<sup>28</sup> *Ibid.*, pp. 344-345.

## MAN AND MR. HUXLEY

*Editor's Note:* In its December issue, 1942, *Fortune* published the last of a series of articles by prominent philosophers dealing with the philosophical matrix of current world problems. "The Biologist Looks at Man" was written by Julian Huxley at his own request and in answer to the solutions advanced by previous contributors. That the article was noticed at some length by *Time* is evidence of its immediate importance. The issues raised by Mr. Huxley are decisive, the challenge to a world now in feverish quest of a saving ideology is unequivocal. Mr. Huxley is to be commended for calling attention to the confusing effect of compromise and inconsistency in dealing with these ultimate problems. It is hoped that the present article will help promote the vigorous thinking and clear choice his article demands.

JULIAN HUXLEY'S rationale, coming last in *Fortune's* series and speaking the positive language of science, takes on a certain appearance of finality. At the present juncture, too many things are at stake to allow any solution of vital problems to go unexamined. Man naturally wants to know not only what solution the biologist offers, but what basic principles are behind the solution and what consequences would follow.

### SCIENCE AND ULTIMATES

The method of Mr. Huxley is the method of science. In his own words, it is a method which "subjects the conclusions of reason to the arbitrament of hard facts to build up an increasing body of tested knowledge."<sup>1</sup> Above all, it is a method that "refuses to ask questions which cannot be answered, and rejects such answers as cannot be provided except by Revelation."<sup>2</sup> The objects with which his science deals are the vast world of sensible phenomena, with its related physical and mathematical laws. The method itself is a progressive one, going as it does from empirical fact to empirical fact, substituting one hypothesis for another,<sup>3</sup> but always proceeding upon the straight plane of sensible phenomena. And as he accumulates his facts, the scientist is ever asking himself *how* these facts are related, *how* they condition one another. The method of science is certainly a valid one. It is a distinct approach to the study of reality, an approach that has been very productive in its benefits to man. One of the greatest achievements of the past two centuries has been the overwhelming progress of the physical sciences.

A difficulty arises, however, when men like Mr. Huxley want to use science and the methods of science for the solution of non-

<sup>1</sup> Julian Huxley, "The Biologist Looks at Man," *Fortune* (December, 1942), p. 139.

<sup>2</sup> *Ibid.*, p. 139.

<sup>3</sup> "Paradoxically, we find we are enabled to accumulate a more complete and a more certain store of knowledge when, as in science, we reject the possibility of absolute completeness or absolute certainty, and are prepared to abandon our dearest theories in the face of new facts." *Ibid.*, p. 148. For a brief description of the difference between the procedure of philosophy and that of the physical sciences, see D. J. B. Hawkins, *Causality and Implication* (London: Sheed and Ward, 1937), pp. 121-122.

scientific problems. Very early in his article, Mr. Huxley tries to forestall this difficulty by stating that the method of science is both "sufficient" and "complete". "When men," he says, "assert that the scientific approach is incomplete, it is because they have not been willing to follow it to its final conclusion, or because they are mistaking an early stage in its growth for full development. Of course it is insufficient if you leave out the latest stage of its development."<sup>4</sup> But such an answer is hardly to the point. The real question is not whether science and the scientific method are sufficient and complete for science;<sup>5</sup> we do not have to exclude the latest stages of scientific progress to know that; science has been sufficient for itself from its very beginnings. Nor will it make any difference if we follow science to its final conclusions, because we know that, in the end, they will still be the conclusions of science. The real question is whether science and the scientific approach is sufficient for *all* reality.

When philosophy states that the method which science applies to reality is incomplete, it simply means that there are other facts besides scientific facts, and other approaches to reality accessible to the human mind besides the one that *ends* at the empirical level of phenomena. This does not mean, of course, that speculative sciences like philosophy or metaphysics are *a priori* sciences, either in the formulation of their principles or in the various stages by which they reach their conclusions.<sup>6</sup> The principles of philosophy are derived from the bed rock of sense experience, especially from such experiences as motion and change. The whole historical development of metaphysics is sufficient proof of this. When a scientist tells us that metaphysical principles are so many *a priori* absolutes, he is really saying that his knowledge of metaphysics is restricted to a very small portion of the field.

In "The Biologist Looks at Man," it is the thesis of Mr. Huxley that the scientific method should not be considered insufficient in any sense. To him the scientific approach is the only approach, and given sufficient time and opportunity will go far in solving our social, ethical, and religious problems. "The scientific approach," he maintains, "empirical and where possible experimental, refusing the absolute for the relative, and rejecting the deductions of pure reason except when based upon the inductions of raw fact, cannot be rejected as insufficient until it has been completely tried out on the analysis of human mind and human affairs as well as on that of nonliving matter."<sup>7</sup>

<sup>4</sup> *Art. cit.*, p. 139.

<sup>5</sup> "The only cure for the insufficiency of science is more science." *Ibid.*, p. 139.

<sup>6</sup> "... the first principles of speculative sciences [e.g., metaphysics] are received through the senses, as the Philosopher [Aristotle] clearly states at the beginning of the *Metaphysics* (i. 1), and at the end of the *Posterior Analytics* (ii. 15). Wherefore the entire consideration of speculative sciences cannot extend farther than knowledge of sensibles can lead." St. Thomas, S. T. I-II, 3. 6c., trans. of Dominican Fathers. "The cognition of first principles is had from sensible things." *Quaest. de An.*, art. 4 ad 6. Cf. also *De Ver.*, 10. 6. ad 2; *In I Meta.*, lect. 1; S. T. I. 85. 3c; *In II Anal. Post.*, lect. 20; *Sum. c. Gent.* III. 13.

<sup>7</sup> *Art. cit.*, pp. 139-140.



It is upon the shifting sands of science that Mr. Huxley would have us build our whole lives. He notes, however, that it is part and parcel of the scientific method to refuse to ask questions that cannot be answered.

And the reason it should not do so is quite evident. For science has neither the knowledge nor technique which would equip it to approach such questions. In his study of phenomena, for instance, the scientist never asks himself why such phenomena exist. For the question of the existence of things, even of such things as observable phenomena, is not a scientific question, and as such, has no meaning for the scientist. But it is the fate of Julian Huxley that he is not only a scientist, but a man; and if as a scientist he can neither prove *nor disprove* the existence of anything, as a man he cannot avoid asking questions which involve such things as a "First Cause, or Creation, or Ultimate Reality".<sup>8</sup>

Any scientist who claims to possess a knowledge that gives a full and consistent explanation of the universe, such an explanation as a mechanic would give of an intricate machine, must sooner or later ask himself two very unscientific questions. These are the questions, Who *made* the machine and *for what* did he make it? They are ultimates in the line of intelligibility; the question, *How?* is not an ultimate. It is answered in terms of phenomenal laws and quantified correlations; and this is the province of science.<sup>9</sup> A scientist *as such* must necessarily refuse to ask the ultimate questions in order to remain a true scientist. This Mr. Huxley professedly has done.

But to make the picture even of phenomena complete, the questions of primary efficient and final causality must eventually be asked—unless, and here is the radical point of departure, all reality is of its nature ultimately unintelligible. If this is the case, then these questions need not be asked. Whether or not reality is ultimately *intelligible* is of course incapable of direct demonstration. The central tradition in all human thought has ever taken for granted that it was; the positivist takes for granted that it is not.<sup>10</sup>

### IS CHANCE SCIENTIFIC?

When a scientist in his study of phenomena happens to ask himself a metaphysical question, he ordinarily does one of two things, depending on the position he has taken regarding the principle of ultimate intelligibility. If he believes there *are* answers to such questions, he consults the philosopher, who because he possesses a metaphysics of existence can properly ask and answer metaphysical ques-

<sup>8</sup> *Ibid.*, p. 152.

<sup>9</sup> For the place of final causes in biology, see W. R. Thompson, *Science and Common Sense* (London: Longmans Green and Co., 1937), pp. 139-141.

<sup>10</sup> That this is Mr. Huxley's position seems evident from such remarks as the following: "The supernatural is . . . in part the unknowable." *Art. cit.*, p. 139. "It [science] refuses to ask questions that cannot be answered . . ." p. 139. "To become truly adult, we must learn to bear the burden of incertitude." p. 150. "A scientifically based philosophy enables us . . . to cease tormenting ourselves with questions that ought not to be asked because they cannot be answered." p. 152.

tions; if he believes such questions have no answers, he refuses to ask them.

In "The Biologist Looks at Man" Mr. Huxley must be credited with having discovered a third way. Disclaiming any intention to ask such questions, he ends by having explained away their answers. When he comes to draw his conclusions that a "scientifically based philosophy enables us . . . to cease tormenting ourselves about questions that ought not to be asked because they cannot be answered—such as questions about a First Cause, or Creation, or Ultimate Reality,"<sup>11</sup> one feels that the real reason they ought not to be asked is not because they cannot be answered, but because science has already given the answers; the scientific substitutes of Mr. Huxley render any further questions unnecessary.

When Mr. Huxley looks at the animal called man, he wonders about his history, for science "introduces history into everything."<sup>12</sup> Obviously, any complete history of man must make some mention of his beginning, and since the scientist is telling the story, the story will be told in a scientific way. In other words, science will continue to employ its descriptive process of the *how*, for this is the only question it is equipped to ask. To the biologist, the history of man is essentially the history of a progressive evolution. Different forms of life will be explained in terms of different complexities of organisms, and the different complexities of the organisms will be explained by the various selective processes of nature, and the various selective processes of nature will be ultimately explained by a series of "biological accidents."

As a case in point, let us take Mr. Huxley's electric eel:

In the electric eel, certain muscles have been modified so that though they have lost their original function of contraction, their electric discharges are accumulated as in a galvanic pile, and the total voltage and current are quite respectable. Whereas in the great majority of cases the electrical properties of living matter play no special part in the life of the animal, they have become the specific function of the eel's electric organs: an accident of nature has become biologically significant.

One may suggest that the same sort of thing has happened with man. In those organs that we call brains . . . the psychoid activities are, in some way, made to reinforce each other until, as is clearly the case in higher animals, they reach a high level of intensity; and they are the dominant and specific function of the brain of man.<sup>13</sup>

Mr. Huxley has his own final cause which he calls chance, and an efficient cause called time. In the following quotation we have an example where, as far as causes are concerned, Mr. Huxley has put the cart before the horse:

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<sup>11</sup> *Loc. cit.*, p. 152.

<sup>12</sup> *Ibid.*, p. 139. For the Christian conception of the progressive history of man through the varying stages of civilization, see E. Gilson, *The Spirit of Mediaeval Philosophy* (New York: Charles Scribner's Sons, 1936), pp. 388-391.

<sup>13</sup> *Ibid.*, p. 141.

New species constantly arise, adapted to slightly different conditions, or produced by the biological accidents of isolation or hybridization. In the evolution of higher mammals . . . one line specialized as predators, and became the carnivores; another specialized in chewing and digesting foliage and herb-  
age, and usually in swift running, to become the ungulates; a third in flying—the bats; a fourth in marine life—the whales and porpoises; and so on.<sup>14</sup>

And some, Mr. Huxley says, specialized in thought, and became men!<sup>15</sup>

Thus, the struggle for existence explains quite sufficiently all specialized organization, which in turn explains the purposiveness we pretend to find in nature. It must be admitted that Mr. Huxley is remarkably consistent. Every type of final cause is uniformly rejected.

Still, may we not ask what meaning has "struggle" or "adaptation" without that which is struggled *for*? Without the adaptation of many means, many circumstances to *one end*—the conservation of self and species? To reject all purpose in the evolving organism is simply to deny that it should struggle for existence rather than for non-existence. The purposive struggle for existence produces and modifies the life-organization—not the other way around. *Purposive* activity alone can explain adaptation and specialization and the evolution of new species. An appeal to the facts of evolution does nothing but accentuate the objectivity of final causes in nature.

Since Mr. Huxley has made much of the work of Charles Darwin, it might be well to consult this eminent scientist's opinion on the matter in hand. In point of fact, Darwin would have been the last to endorse Mr. Huxley's tychism. He never intended that his scientific theory should make it "possible and necessary to dispense with the idea of God guiding the evolutionary courses of life."<sup>16</sup> In concluding his *Descent of Man* Darwin has this to say (Part III, Chapter XXI): "The birth both of the species and of the individual are equally parts of that grand sequence of events, which our minds refuse to accept as the result of blind chance. The understanding revolts at such a conclusion, . . ."<sup>17</sup> In other words, Darwin was aware that to strain out the final cause one must swallow the camel of unintelligibility.

<sup>14</sup> *Ibid.*, p. 141.

<sup>15</sup> "The evolution of man by conceptual thought, of conscious reason and purpose, finally produced a dominant type with radically new biological characteristics." *Ibid.*, p. 141.

<sup>16</sup> *Art. cit.*, p. 146.

<sup>17</sup> Alfred Noyes cites this text in his article, "The Edge of the Abyss", published by *Fortune* two months previous to Mr. Huxley's article and in the same series. Mr. Huxley of course had no opportunity to reply to Mr. Noyes. But whatever may be said of the earlier contributors to the series, Mr. Noyes definitely does not dodge the issues raised by the Positivist philosophy of Mr. Huxley. The reader will find in this article a penetrating analysis of the philosophic premises behind agnostic scientism, together with a striking portrayal of the influence and consequences of this position in our Western world. The article closes by suggesting a Christian theory of evolution; that is, one that does not go beyond its scientific premises to reject finality.



The difficulty with Mr. Huxley's solution is that it leaves the original problem entirely unchanged. And if he should insist that so many millions of years and such a sequence of "biological accidents" should be sufficient for any evolution from matter, even of such things as life<sup>18</sup> or thought, then such statements rob his universe of its own scientific intelligibility. To say that life or thought could happen by an accident, even by a "biological" accident, is not to give an explanation of the origin of these phenomena, but rather to admit that no explanation can be given. The upshot of all this is to make nature not merely blind, but chaotic; and when this happens, science at least *begins* to become impossible. For if we say that the formulation of mechanical laws, the slow but continuous process of evolution, structural complexities, new species and individual types, are, one and all, ultimately ascribable to accidents of nature, we shall soon be asking ourselves whether there is anything in nature *not* due to an accident; or at least we shall wonder whether there is any meaning left to the word "accident."

It is the psychological privilege of man that he is introspective. When he organizes material for the construction of some work he has in mind, he has no misgivings that the particular organization which he gives his material depends upon the purpose which the finished product must fulfill. For this reason he will put wheels on a locomotive, but not on a battleship, because only one of these is going to run on rails. And when man sees that there exists different organizations in nature, he very naturally concludes they are due to the different purposes that these organisms must serve. To him existing differences are no more the result of any "accident of nature" than the difference between a battleship and a railroad train are the result of some accident of man. The organization which man finds in his own work he attributes to his own mind; and that which he finds in nature he also attributes to a mind,—the Mind of nature, which is God. And he does this not because of the analogy of Paley, but because of the very nature of order.

Here the position of the biologist becomes a little precarious. Man and the mind of man are not outside of nature, but in nature,—a part of nature, as Mr. Huxley insists. To be consistent, then, he must end by telling man that even *his* most purposeful actions are really nothing more or less than the result of mental accidents. When science becomes unscientific, it destroys itself.<sup>19</sup>

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<sup>18</sup> "The scientific view is that under the conditions obtaining during the early history of the earth, the particular combination of matter that we call life was formed in the cosmic test tube, and once formed could maintain itself by its power of self-reproduction." *Art cit.*, p. 140.

<sup>19</sup> "It is the fallacy of a scientist who, because he does not know how to ask metaphysical problems, obstinately refuses their correct metaphysical answers. In the *Inferno* of the world of knowledge, there is a special punishment for this sort of sin; it is the relapse into mythology. Better known as a distinguished zoologist, Julian Huxley must also be credited with having added the god Struggle to the already large family of the Olympians." E. Gilson, *God and Philosophy* (New Haven: Yale University Press, 1941), pp. 135-136.

## THE CASE AGAINST METAPHYSICS

Why is it, then, that Mr. Huxley, who *as a scientist* possesses neither the knowledge nor the technique for the solution of metaphysical problems, insists on giving metaphysical problems pseudo-scientific answers? To this question there is, no doubt, more than one answer. Usually a scientist is sufficiently acquainted with the history of philosophy to know that in metaphysical matters all philosophers have not said the same thing. This disagreement has not been about the minutiae of metaphysics, but about issues that seem fundamental. Ideas have a certain inner necessity, and if a philosopher makes a bad start, the logic of his ideas may lead him over paths which, at the beginning he had no intention of taking.<sup>20</sup> The welter of conflicting opinions which, as part of the history of philosophy, is familiar to the scientist, often leads him to have a profound distrust of metaphysics. And this distrust is not lessened by the scientist's knowledge of another field; in the study of mathematics he finds things very much the reverse.<sup>21</sup> The task here is to find two mathematicians who are in fundamental disagreement. Hence comes the temptation of the positivist to make mathematics the measure of all things. The highest knowledge of our day, even for certain modern "metaphysicians," is not metaphysics, but mathematics.<sup>22</sup>

In the case of Mr. Huxley, there seems to be not merely a distrust of metaphysics, but a positive fear of it. If certain philosophers have hindered the progress of science in the past by an illegitimate use of final and efficient causes to explain true scientific phenomena, there is the possibility that the same thing may occur again if these causes are allowed a separate metaphysical autonomy.<sup>23</sup>

If one were to employ the language of Freud, one could say that the fear of these causes has given rise in Mr. Huxley to something we might call a complex. And since such conflicts, to continue our Freudian terminology, are never faced "in the light of conscious reason," they must be resolved by irrational methods; "emotional force must be met by emotional force."<sup>24</sup> Mr. Huxley has resolved his

<sup>20</sup> "Parvus error in principio magnus est in fine." St. Thomas, *De Ente et Essentia*, in Prooemio. "Si quis modicum transgreditur a veritate circa principium, procedens in ulteriora, fit magis longe a veritate decies millies. Et hoc ideo, quia omnia subsequencia dependent ex suis principiis." *In I De Coelo et Mundo*, lect. 9 (Vives ed.).

<sup>21</sup> St. Thomas was well aware of the advantage of mathematics over metaphysics from the viewpoint of merely subjective certitude. "The mathematical process is more certain than the metaphysical inasmuch as metaphysical being is more removed from the senses in which our cognition takes its rise. . . . Mathematical entities, such as line, figure, number, etc., fall beneath the senses and are subject to the imagination; and thus the human intellect, receiving these realities from the imagination, more easily and with greater certainty attains to their understanding than it does to the understanding of such things as substance, potency, act, etc." *In Boethii De Trinitate*, 6. 1c.

<sup>22</sup> Mr. Huxley in his article mentions mathematics only twice, but his following reference to the subject is significant: "Truth is only absolute when it deals with the incomplete, such as the abstractions from reality that form the basis of mathematics." *Art. cit.*, p. 148.

<sup>23</sup> Thus it is that "today many scientists still consider the fear of final causes the beginning of scientific wisdom." E. Gilson, *op. cit.* p. 129.

<sup>24</sup> *Art. cit.*, p. 146.

struggle with final and efficient causes by creating his own substitutes for them; he simply represses the metaphysical nature of these causes, and then projects into his method their pseudo-scientific substitutes. Time and chance are the "irrational defense mechanisms" of an otherwise incomplete approach to the material universe.

When this substitution has been made, the result is a philosophy based on science. And because it is a philosophy it will ask, if not consciously, then unconsciously, philosophical questions. But because it is only a pseudo-philosophy, essentially limited to a scientific technique, it will continue to give the wrong answers. It is largely because these answers have been taken to be the right answers that we have that confusion of mind which is the tragedy of our day.

### THE ULTIMATE CHOICE

If there are problems today that must be solved, we should be very careful whom we allow to solve them; the blood of a total war is reminding us that it is "later than we think." When "the biologist looks at man," let us take care to understand just what he is about. In a total war, it is men who die; and it is a hard saying to tell them that they must die for ideals which are merely the results of language habits<sup>25</sup> and the chance construction of the human mind.<sup>26</sup> Nor is it "inspiring" to be told in our struggle that we must not shift any responsibility onto the shoulders of a non-existent God.<sup>27</sup> What the philosophy of Mr. Huxley, founded on chance and biological struggle, has to offer democracy in its efforts to restore world order is not easy to see; the man who is absolutely certain that *all* things are relative has no more right to defend democracy than to oppose it. What Mr. Huxley really succeeds in telling us in his article is that men must make a choice. But that choice is not between the absolute and the relative, nor between science and philosophy, but between ultimate intelligibility or unintelligibility, between God and chaos. And since we must make the choice, Mr. Huxley would have us be honest and go all the way.

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<sup>25</sup> *Ibid.*, pp. 146 and 150.

<sup>26</sup> *Ibid.*, p. 148. "The truth, however, as shown by the extension of the scientific method into individual and social psychology, is that we create our own values." *Ibid.*, p. 152.

<sup>27</sup> *Ibid.*, pp. 140 and 152. One is tempted to wonder what Mr. Huxley makes of the American soldier's remark to Colonel Clear that "there are no atheists in foxholes."



# A STUDY OF GENUS IN THE PHILOSOPHY OF ST. THOMAS AQUINAS

(Continued from January Issue)

## Part Two: PRINCIPLES OF GENUS, DIFFERENCE, AND SPECIES IN THE *Res Naturae*.

IN OUR study of the predication of genus, difference, species, and definition, we have seen that they all signify the same nature in different ways. We shall endeavor now to find in the structure of the singular existent in nature an explanation of how the same thing can exercise these different acts of intelligible being. From the character of genus and difference we know that we must find some composition of principles which may be the foundation for knowledges which are related as matter to form, as the potential and imperfect to the actual and perfect.

In studying the principles of being of material substance we are working within the general problem of the principles of multiple being. We are concerned with a particular aspect of the problem: how there can be a multiplicity of being which arises not only from formal diversity in things, but also within the same species from the communication of the specific nature to many individuals. In making this study we shall consider first the general problem of multiple being, and then proceed to find the principles of the multiplicity of being in the order of material substance.

### MULTIPLE BEING AND THE LIMITATION OF ACT BY POTENCY

Any problem of multiple being can be resolved only in terms of some composition of act and potency. For multiple being must be finite being.<sup>1</sup> Finite being is possible only by a composition of act and potency; for act in the order in which it is act is limited only by its reception in a potency as subject. This is a fundamental principle of Thomistic Metaphysics. It is the constant teaching of St. Thomas,<sup>2</sup> rooted in the primary, irreducible source of all plurality and diversity, the division of being and non-being.<sup>3</sup>

We may be content here to trace the outlines of that doctrine of limitation of act by potency, as an introduction to our present study.<sup>4</sup>

<sup>1</sup> Cf. *S. T.*, I. 11. 3 resp.

<sup>2</sup> Cf. *Comp. Theol.* 18; *In I Sent.* 8. 5. 1; *Quodl.* III. 8. 20; *Quodl.* VII. 3. 7; *Quodl.* IX. 4. 6; *Sum. c. Gent.* I. 28, 43; II. 52-54; III. 65; *S. T.*, I. 45. 5 ad 1; I. 50. 2 ad 3; 75. 5 ad 4; 4. 2 resp.; *De Ente V*; *De Subst. Separ.* 6; *De Spirit. Creat.* 8; *In III. Sent.* 13. 1. 2 sol 2. See also G. Marietti, S.J., *Les Points Fondamentaux de la Philosophie Thomiste*, (Turin-Rome: Marietti, 1926), pp. 1-36.

<sup>3</sup> Cf. *In Boet. De Trin.* IV. 1 and the related texts which we shall soon examine.

<sup>4</sup> This paragraph and the next have appeared in an earlier article, "Matter As a Principle of Being," *The Modern Schoolman*, XIX (March, 1942), pp. 47-50. I am restoring them here to their original place, for they were written as part of this study and are necessary for our present discussion.

Subsistent *Esse*, the subsistent act *to be*, must be infinite and unique. For *esse* is the act of all things, even of forms, since nothing has actuality except insofar as it *is*. *To be* is the most perfect, the ultimate act, participable by all, but itself participating nothing. *To be* simply, therefore, names the perfection of perfections, the fulness of perfection.<sup>5</sup>

Since subsistent *Esse* is infinite perfection, and is unique, all other things have *esse* only as they participate it; and the *esse*, the *to be*, thus received is limited according to the mode of the recipient. That mode or measure or limit of the act of being is essence, which is related to *esse* as the receiving to the received, as potency to act.<sup>6</sup> Similarly any form or essence, if it be subsistent, is unique, and unlimited in its order. For of itself it is act, perfection of a certain order. If it is limited, it is limited only by its reception in a subject, which participates it imperfectly.<sup>7</sup> Just as form or essence is itself a limit upon *esse*, and is related to *esse* as potency to act; so another subject, capacity, potency is required for the limitation of a form and its participation by many subjects.<sup>8</sup>

#### THE ROLE OF DIVISION IN MULTIPLE BEING

It was stated above that the doctrine of the limitation of act by potency is founded in the primary, irreducible source of all plurality and diversity, the division of being and non-being. It is important that we consider the reason for that statement, that we consider how the question of limited being is a question of being and non-being. For it may well be said that the fundamental problem of Metaphysics, the problem of the unity of many diverse beings in being, is a question of how being can *be* and yet *not be*. You are being and not being: for you *are* man, and *are not* horse; you *are* this man, and *are not* that man. Every explanation of limitation must somehow be an explanation of a mode of non-being.

Perhaps the best approach to the question is by an analysis of the capital text in St. Thomas' Commentary on the *De Trinitate* of Boethius, in which he explains the meaning of Boethius' statement that diversity is the principle of plurality.<sup>9</sup>

- I. Something is said to be many because it is divisible, or divided.<sup>10</sup> Every cause of division, therefore, must be regarded as a cause of plurality.
- II. But the cause of division must be taken differently in posterior and composite things from the way in which it is taken in first and simple principles.

A. For in posterior and composite things the quasi formal cause of

<sup>5</sup> Cf. S. T., I. 4. 1 ad 3; I. 3. 4 resp.

<sup>6</sup> *Sum. c. Gent.* II. 52. "Si enim esse . . ." (Leon. man. ed., p. 145a); *Quodl.* III. 8. 20; *De Ente* V, p. 36; *In I Sent.* 8. 5. 1.

<sup>7</sup> *Sum. c. Gent.* 1. 43, "Amplius. Omnis actus . . .", (Leon. Man. ed.), p. 41b; *Comp. Theol.* 18; *In III Sent.* 13. 1. 2 sol 2.

<sup>8</sup> Cf. *In III Sent.* 13. 1. 2 sol. 2, vol. III, pp. 402-403 (an excellent text).

<sup>9</sup> " . . . Principium enim pluralitatis, alteritas est . . ." *In Librum Boetii De Trinitate Expositio*, S. Thomae Aquinatis Opuscula Selecta, vol. II (Paris: Lethielleux, 1881), lect. I, p. 38. My analysis is based upon this text, which in no significant way differs from the later text of the same publisher edited by Mandonnet.

<sup>10</sup> Cf. *In III Physic.* 11, (Vives ed.).

division, because of which division is made, is the diversity of simple, first principles.

1. This is clear in the division of quantity. For one part of a line is divided from another because it has a different position, which is the quasi formal difference of continuous quantity having position.
  2. It is clear also in the division of substances. For a man is divided from ass because it has diverse constitutive differences.
- B. But the diversity by which posterior composites are divided according to prior and simpler principles, presupposes a plurality of first and simple principles. Man and ass have diverse differences because rational and irrational are not one, but two differences.
- C. Nor can it always be said that this plurality has another prior and simpler diversity as its cause, for this would be to go to infinity.

III. And therefore of the plurality and division of prior and simple principles we must assign another manner of cause.

- A. For such are divided by reason of themselves.
- B. But it cannot be that being is divided from being in so far as it is being: nothing is divided from being except non-being. Likewise this being is not divided from that, unless in this being is included the negation of that.<sup>11</sup>
- C. In the case of first concepts, therefore, negative propositions are immediate,<sup>12</sup> in which we might say that the negation of one concept is in the other.
- D. The first caused also makes a plurality with its cause, since it does not equal it (*non attingit ad eam*).

Following this, some have affirmed that in a certain order plurality is caused by the one itself; so that from one proceeds first one, which with its cause constitutes a plurality; and from this now two can proceed, one according to the caused itself, the other according to its conjunction with the cause. But we are not forced to say this, since some one could imitate the first in some respect in which the second falls short of it, and fall short of it in some respect in which the second imitates it; and thus many first effects can be found, in each of which is a negation of the cause, and a negation of the other effect either according to the same perfection or according to a greater removal in one and the same perfection (*secundum idem, vel secundum remotiorem distantiam in uno et eodem*).

- E. And thus it is clear that the first cause or principle of plurality or division is from affirmation and negation, so that the order of origin of plurality be understood to be such that *first we must understand being and non-being*,<sup>13</sup> by which the first divided themselves are con-

<sup>11</sup> ". . . in multitudine negatio est, secundum quod una res distinguitur ab alia per negationem; unde in multitudine est negatio vel privatio realis secundum quod una res non dicitur esse alia . . ." *In I. Sent.* 24. 1. 3 ad 1, (Mandonnet edition), p. 583.

"Sed in ratione distinctionis est negatio: distincta enim sunt quorum unum non est aliud . . ." *Sum. c. Gent.* 71. "Amplius. Deus . . ." (Leon. Man. ed.), p. 67b.

<sup>12</sup> ". . . Unde et prima, quae seipsis distinguuntur, mutuo sui negationem includunt: ratione cuius negativae propositiones in eis sunt immediatae . . ." *Sum. c. Gent.* 1. c.

<sup>13</sup> ". . . ens est prima intentio intellectus; unde enti non potest aliquid opponi per modum contrarietatis vel privationis, sed solum per modum negationis; quia sicut ipsum non fundatur in aliquo, ita nec oppositum suum; opposita enim sunt circa idem . . ." *In I. Sent.* 19. 5. 1 ad 8, (Mandonnet edition), p. 490.



stituted and through this there are many. Just as the first being in so far as it is undivided, is immediately found to be one, so after division of being and non-being immediately is found a plurality of first simple principles.

IV. The nature of diversity, then, follows this plurality, accordingly as there remains in it (i.e. in the nature of diversity) the force of its cause, namely the opposition of being and non-being.

A. For one thing is said to be diverse when compared with another just because it is not that other.

B. And since a second cause does not produce its effect except through the force of the first cause, a plurality of principles does not cause a division and plurality in posterior and composite things except in so far as there remains between them the force of the first opposition, which is between being and non-being, from which the plurality of principles has the nature of diversity; and thus the diversity of firsts causes the diversity of seconds.

V. According to this, Boethius' statement is true, that diversity is the principle of plurality.

A. For diversity is found in some things because diverse principles are in them.

B. Moreover, although division precedes the plurality of first principles, diversity does not precede it; for division does not require that each of the divided *be*, since division is by affirmation and negation; but diversity requires that each be a being: it supposes therefore a plurality.

C. In no way, then, can diversity be the cause of the plurality of first principles, unless diversity be taken in the sense of division.

D. Boethius, therefore, is speaking about the plurality of composites.

1. This is clear from the fact that he introduces a proof concerning those things which are diverse either in genus or in species or in number; this holds only for composites.

2. For those, moreover, who affirm that Father and Son are unequal Gods, there follows a composition at least in concept, in so far as they affirm that Father and Son agree in that they are God, and differ in that they are unequal.

#### PRINCIPLES OF DIVISION IN THE *Res Naturae*.

As an intelligible being a reduction must be made of all concepts to that which is first in intelligibility in the order of concepts, i.e. *being*; and of all propositions to that which is first in the order of propositions, the principle of contradiction; being is not non-being;<sup>14</sup> so there must be a reduction of all plurality to the division of being and non-being. For multitude is intelligible only in consequence upon division, since the order of intelligibility in concepts is

- (1) being . . . non-being,
- (3) one (undivided),
- (4) many (divided).<sup>15</sup>

Likewise in the being which things have in nature, a reduction must be made of all act, all perfection, to that which is act simply, the

<sup>14</sup> Cf. *De Ver.* I. 1 resp.

<sup>15</sup> *Ibid.*; *In X Meta.*, lect. 4, Nos. 1995-1998; *S. T.*, I. 11. 2 ad 4.

perfection of perfections, *to be*.<sup>16</sup> In all things, what they have of being they have because of some principle by which they participate that pure act which is *to be* simply. Moreover, we must find in the thing in nature some intrinsic principle of that non-being in the thing<sup>17</sup> which is the source of its limitation and of its diversity from other things. For, although the texts which we have examined have made the reduction to the concepts of being and non-being as the principles of all diversity, and have been concerned, therefore, with intelligible being (since the modes of opposition are logical intentions); still we must look for a foundation for this opposition in the principles of that being which things have in nature. Their intelligible being is caused by and proportioned to their being in nature.<sup>18</sup>

We must determine first, therefore, how the force of the first division of being and non-being carries into the other modes of opposition, which participate somehow that pure opposition. Having found what sort of being and non-being is the immediate principle of the kinds of opposition which we have in material substances, we shall determine what sort of intrinsic principles of being and non-being must constitute the material substance in nature.

The pure opposition of being and non-being, so perfect that one of the opposites simply is not,<sup>19</sup> is the opposition of contradiction. It is an immediate opposition, with absolutely no mean between the two extremes.<sup>20</sup> Though all other diversity requires that both opposites be *beings*, this opposition does not, since it is the division of being simply and non-being.<sup>21</sup>

Contradiction is the principle of all other opposition:<sup>22</sup> the other modes of opposition participate its simple affirmation and negation. Some of these other oppositions are also immediate (privations and immediate contraries, for example, *equal* and *unequal*), but their immediacy is derived from that of contradiction:<sup>23</sup> it is not an absolute immediacy, and absolute opposition, but is confined to a certain subject.

The most perfect of the derived oppositions is that of privation, for one of the extremes in privation is non-being; not however non-being absolutely, as in the case of contradiction,<sup>24</sup> but a non-being opposed to a certain mode of being, a negation of being in a determined subject.<sup>25</sup> Thus the non-being of privation does not exclude

<sup>16</sup> S. T. I. 4. 1 ad 3; I. 7. 1; *De Pot.* 7. 2 ad 9; S. T. I. 3. 4 resp.; I. 4. 2 resp.

<sup>17</sup> *Sum. c. Gent.* I. 28 "Omnis enim . . ." "Sicut autem omnis . . ." (Leon. Man. ed.), pp. 29b-30a.

<sup>18</sup> *In IX Meta.*, lect. 11, Nos. 1896-1898.

<sup>19</sup> *In Boet. De Trin.* IV. 1 resp.; *In I Sent.* 19. 5. 1 ad 8 (note 13 supra).

<sup>20</sup> Cf. *In I Post. Anal.*, lect. 5, #5.

<sup>21</sup> *In Boet. De Trin.* IV. 1 resp.

<sup>22</sup> S. T. I-II. 35. 4 resp.; *De Trin.* IV. 1 resp.

<sup>23</sup> *In I Post. Anal.*, lect. 5, #5, *supra*, n. 20.

<sup>24</sup> ". . . Nulla privatio tollit totaliter esse, quia privatio est 'negatio in subjecto,' secundum Philosophum, sed tamen omnis privatio tollit aliquod esse . . ." S. T. I. 11. 2 ad 1.

<sup>25</sup> *In I Post. anal.*, lect. 5, #5; *Sum. c. Gent.* I. 71 "*Amplius. Deus . . .*" (Leon. man. ed.), p. 67b; S. T. I. 11. 2 ad 1.

being in act simply (absolutely), but it excludes *such* being in act.<sup>26</sup>

Privation, in turn, is the principle of contrariety; moreover, the first contraries in any genus are privation and possession.<sup>27</sup> And of two contraries one always has some admixture of privation.<sup>28</sup> Yet it is not pure privation, for it too participates the nature of the genus, as, for example, irrational animal participates the genus animal. Each of the contraries, therefore, is a certain nature, but one participates the generic nature with some defect.<sup>29</sup> Thus contraries differ according to form.<sup>30</sup> Contrariety is found in all genera, for the differences which divide all genera are drawn from the common principle of excellence and defect, to which all contraries are reduced.<sup>31</sup> all genera are divided by the perfect and the imperfect.<sup>32</sup>

We need not go on to consider the opposition of relation, which is the weakest of the four. In contrariety we have found the mode of opposition of things differing in nature. This is the mode of formal diversity in things. If we were concerned with simple substances, we should have to go no further than contrariety to explain all multiplicity in such an order of things: here we should have the kind of being and non-being, the kind of division, which is needed to explain multiplicity and diversity of simple substances; and we should be able to find one kind of principle of their being in nature to explain such diversity: form. In such an order of beings there is no further question concerning individual diversity: every diversity of form, of essence, is likewise a diversity of individual; for the form is subsistent, not shared by many.<sup>33</sup> Moreover, in simple substances the whole problem of genus is only imposed from our mode of knowledge, proportioned to material things. Genus and difference

<sup>26</sup> "... Tertio modo dicitur non ens, quod est in potentia, quae non excludit esse in actu simpliciter sed esse actu hoc; sicut non album dicitur non ens, et non bonum: ..." *In V Physic.*, lect. 2, (Vives ed.) v. XXII, p. 500a.

<sup>26</sup> *In X Meta.*, lect. 6; 4 #1988; *In I Physic.*, lect. 10 #7; *Sum. c. Gent.* I. 71 "Praeterea ..." (Leon. man. ed.), p.67b.

<sup>28</sup> *In I Physic.*, lect. 10 #7; *In I Post, Anal.*, lect. 5 #5.

<sup>29</sup> "... Alterum enim contrariorum semper est privatio, sed non privatio pura. Sic enim non participaret naturam generis, cum contraria sint in eodem genere. Oportet igitur quod utrumque contrariorum sit natura quaedam, licet alterum eorum participet naturam generis eum quodam defectu, sicut nigrum se habet ad album ..." *In X Meta.*, lect. 4 #1988.

<sup>30</sup> *Ibid.*, #1993.

<sup>31</sup> "Dicendum est igitur quod *contrarietas differentiarum, quae est in omnibus generibus* [italics mine], attenditur secundum communem radicem contrarietatis, quae quidem est excellentia et defectus, ad quam oppositionem omnia contraria reducuntur ..." *In V Physic.*, lect. 3 #5. I have italicized part of this text because it brings out a common element of contrariety which is found in all genera, and which is opposed in other portions of this same *lectio* to that special character of contraries "... quae maxime distant ..." which is found in only three genera. This text occurs at the point at which Aristotle is determining in what genera *motus* occurs. Cf. *Ibid.* 1. 8 #2.

<sup>32</sup> "... Unde, cum omnia genera dividantur contrariis differentiis, oportet in omnibus generibus esse perfectum et imperfectum; sicut in substantia aliquid est ut forma, et aliquid ut privatio; et in qualitate aliquid est ut album quod est perfectum, et aliquid ut nigrum, quod est quasi imperfectum; ..." *Ibid.* III. 1 #8. The text continues with examples in other genera.

<sup>33</sup> S. T. I. 75. 7 resp.



in simple substances both must be taken from the form, for there is no composition of substantial principles. There is, however, a sufficient basis for our conceiving such substances according to genus and difference: it is the composition of essence as potency and *esse* as act. With this order, however, we are not concerned.<sup>34</sup>

In material substances we find a further diversity. Many things share the same nature, e.g. *humanity*; and yet this man is not that man. Individuals of the same species cannot differ by any formal diversity: if they differed formally, they would not be of the same species. We must find some other proximate principle of division.

The principle of division and multiplication of the act of being is form, essence, which is potential with respect to *esse* and receives its act of being according to its own mode; every finite being is a composite of essence and *esse*. Likewise the principle of division and multiplication of form must be some subject which is potential with respect to form, and which receives it according to a certain measure; every essence which is shared by many individuals is a composite of form and another substantial principle, the ultimate subject matter, which is somehow the source of divisibility of the substance.<sup>35</sup>

### THE ULTIMATE PRINCIPLE OF DIVISION

This substantial principle, pure potency, is potency in all genera: not only to substantial form, but to all the accidental forms to which the composite is in potency.<sup>36</sup> For matter is the first and basic potency in the composite. It is by reason of matter that material substance has its character of ultimate subject.<sup>37</sup> Although we say that the composite is in potency to its accidents, yet we must reduce all potency of the composite to its first potency, prime matter. For in things composed of act and potency, that which is its first potency or first subject is incorruptible. In simple substances this first subject is the substance itself, which is simple and incorruptible. In composite and corruptible substances this first potency is prime matter, which is pure potency, incorruptible.<sup>38</sup>

Varying according to its proportion to form, matter is potency diversely in the ten genera of being. Thus, that which is the genus substance is related to matter as its *part*; that which is in the genus quantity does not have matter as its part, but is related to it as *measure*; and quality is related to it as *disposition*; and from these two genera as intermediates all other genera follow diverse relations

<sup>34</sup> For genus in angels see, for example, *Quodl.* IX. 4. 6 ad 3; *De Ente* VI, pp. 46-48; *In II Sent.* 3. 1. 5.

<sup>35</sup> For a more complete discussion of matter see the article already cited, "Matter as a Principle of Being," *The Modern Schoolman*, XIX (March, 1942), pp. 47-50. In the following paragraphs I am repeating a portion of that article required for our present discussion.

<sup>36</sup> The potency of matter extends only to those acts to which the composite is in potency. It is not, therefore, the potency to the acts of intellect, nor to any form free from the conditions of matter.

<sup>37</sup> *In Boet. De Trin.* IV. 2 resp.; *De Pot.* 3. 7 resp. (Vives ed.), vol. XIII, p. 59b.

<sup>38</sup> *Sum. c. Gent.* II. 55. "Praeterea. In quibuscumque . . ." (Leon. man. ed.), p. 148a.

to matter, which is the part of substance which gives substance the character of subject, according to which it is related to accidents.<sup>39</sup>

Matter, therefore, is potency to all acts, that is, to all natural forms, forms which have their being in matter. But it is potency to them in a certain order. The very first act to which it is potency is *to be*. It is impossible to imagine matter being hot, or of such magnitude, before it *is* in act. It receives its *to be in act (esse actu)* through substantial form and consequently is potency first in the genus of substance.<sup>40</sup> Moreover, in the genus of substance we determine a certain order in the forms to which matter is potency. Since the forms which divide any genus are contraries and are related as the perfect and the imperfect, the species may be compared to species of numbers or figures, in which the greater always includes the lesser: living things are more perfect than non-living things, and contain virtually all their perfections; so also man is more perfect than the species of brute animal, and contains virtually all their perfections.<sup>41</sup> By one substantial form man receives the perfections of many grades of being.

It is only by exploiting the potency of matter that the Metaphysician can find the ultimate principle of division within the species, i.e. the principle of individuation.<sup>42</sup> Matter in itself does not suffice to explain division; for matter in itself is wholly without determination.<sup>43</sup> It is a principle of division because it is potency in the genus of quantity: since order of parts and diversity of position is of the essence of quantity, we find in quantity the first source of divisibility within a species: without quantity substance is indivisible.<sup>44</sup> It is only by finding in the potency of matter this ordering to a principle of divisibility that we can understand how it is possible for a nature to be shared by many individuals, and so understand the principles of such a mode of being.<sup>45</sup>

In citing as I have the capital text on individuation from the Commentary on the *De Trinitate* of Boethius, I do not wish to enter into the controversy concerning St. Thomas' position on terminate and interminate dimensions.<sup>46</sup> Any such discussion is beyond the scope of this present work. Two observations concerning these texts

<sup>39</sup> In *Boet. De Trin.* IV. 2 resp.

<sup>40</sup> *S. T. I.* 76. 6 resp.

<sup>41</sup> *S. T. I.* 76. 3 resp.; *I.* 76. 6 ad 1; *I.* 76. 4; *I.* 118. 2 ad 2; *Quodl.* I. 4. 6.

<sup>42</sup> Although we are not concerned with the problem of individuation as a major part of our inquiry; still to understand how genus and species differ in nature, we must see that the division of the species is not by any formal diversity, and that the species, consequently, is one nature found existing in things, whereas the genus is not. Similarly in explaining the determination of genus to species and of species to individual in intelligible being, it is important to show that this determination occurs diversely, as is clear from the text of *De Ente* III which we examined in the first part of this study.

<sup>43</sup> *S. T. I.* 50. 2 resp; *In I. Sent.* 8. 5. 2 resp.; *In Boet. De Trin.* IV. 2 resp,

<sup>44</sup> Cf. *In Boet. De Trin.* IV. 2 resp. and IV. 2 ad 3; ad 5; V. 3. ad 5.

<sup>45</sup> A similar case is the study of how the *formae praeintellectae in materia* explain the relation of the substantial form to its dispositions: *S. T. I.* 76. 6 ad 1, 2.

<sup>46</sup> For the discussion as to whether the texts on terminate and interminate dimensions are irreconcilable, and whether they represent a vacillation between two contrary doctrines, see, for example, Roland-Gosselin, O.P., "Le 'De Ente

on individuation, however, do have an important bearing upon our inquiry. First, it is important to note that the division of the specific nature by matter is quite different from the *formal* division of the generic nature. Secondly, we must observe here a point of method. It is the technique of searching for an explanation of a certain mode of being in the *formae praeintellectae* in *materia*, considering the diverse forms to which matter is potency according to a certain natural order in which they stand *prior* to the actual *esse* of the thing, an order in which they must be understood in matter as principles of a certain mode of being. This examination of matter the Metaphysician alone can undertake, for the Metaphysician alone inquires into being as *being*. He alone asks how a thing stands as ordered to its act of being, how it can *be* in this mode, by what composition of principles such being is possible. It is only his inquiry, therefore, which penetrates to the principles of being, considered prior to the *esse* of the thing to discover how they contribute to such a mode of being. As matter is in act, it is found only as actuated simultaneously by this determined substantial form and these determined dimensions, of such length, breadth, depth, and of such figure. But considered as a principle of being, matter is pure potency, potency at once to all natural forms, in all genera. Laying open, as it were, the potency of matter, the Metaphysician can find in its manifold of possible actuations a certain order or gradation of acts, each of which is the source *per se primo* of some character of the existing composite. Asking what is the principle of that ultimate division of things by which many individuals may be found to share the same nature, the Metaphysician searches among the many acts to which matter is potency, and finds that quantity, by reason of the order of parts and difference of position which is of the nature of dimensions (extension), is the absolute first source of such divisibility.<sup>47</sup>

#### COMPOSITION IN THE *Res Naturae*.

Having determined the principles of being of material substance, we may describe the structure of the singular substance, the *res naturae* or *suppositum*<sup>48</sup> in terms of a three-fold composition:

##### (a) *esse* and essence,

et *Essentia* de S. Thomas d'Aquin," *Bibliothèque Thomiste* VIII (Le Saulchoir: Kain, 1926), p. 109; Forest, A., *La Structure Métaphysique du Concret Selon Saint Thomas d'Aquin* (Paris: Vrin, 1931), p. 239; De Raeymaeker, L., *Metaphysica Generalis* (2nd Ed., Lovanii: Warny, 1935, 2 vols.), vol. II, 383-389.

A solution which reconciles the texts and shows that the various statements of the doctrine on individuation represent stages in one consistent doctrine, most adequately expressed in the capital text in *In Boet. De Trin.* IV. 2, has been offered in a series of lectures as yet unpublished by B. J. Muller-Thym, *Questions in the Metaphysics of St. Thomas*: "The Principle of Individuation," delivered in the St. Louis University Graduate School, February-June, 1941.

<sup>47</sup> By a similar study of matter as pure potency in material substance we shall find the principles of our knowledge by genus, difference, and species, and shall indicate also the bases for integral part, *genus subjectum*, and *forma totius*, all of which are closely related to our problem.

<sup>48</sup> The singular material substance is signified by various names: *individuum*, *res naturae*, *singulare*, *suppositum*, *res*, *quod est*. Cf. *In VII Meta.*, 11 #1535-1536; S. T., I. 3. 3 resp.; *Quodl.*, II. 2. 4; S. T., I. 85. 3 ad 4; 29. 2 tresp.



- (b) form and matter as components of essence,
- (c) essence (or nature) and individuating principles (accidents) as components of the supposite.

*Esse* comes to the composite of matter and form, for *esse* is not the form simply, nor is it the proper act of the matter, but the act of the whole being.<sup>49</sup>

The essence is not matter alone, nor form alone, but the composite of matter and form.<sup>50</sup> It does not include, however, individual matter, but only common matter.<sup>51</sup>

The supposite includes more than the essence, for it is a composite of the essence and the individual matter (*materia demonstrata, signata, individualis*) and other accidents. We must note, however, that *essence* may be taken in two ways: signified as part of the thing (*quo est*) or as the whole thing (*quod est*).<sup>52</sup> Signified as a part, the essence (*essentia, natura, natura absoluta, natura communis, quidditas*) includes only what pertains to the essence *per se*; for example, *humanity*, prescinding from anything accidental to it, whether it be individuating principles or other accidents. The supposite is the whole singular existent, including nature, individuating principles, and other accidents. It is signified by a word like *man*, which indicates the nature without precision of those things which are found in the thing accidental to the nature.<sup>53</sup>

The nature thus taken is the formal principle of the supposite, received into the individual matter of the supposite. It is formal as constituting the thing in its species. As a formal principle, however, the nature must be distinguished from the substantial form: the nature is the *forma totius*, not the *forma partis*. The *forma partis* is the substantial form, a simple principle which determines and actuates matter. It is received by matter as something outside

<sup>49</sup> *Sum. c. Gent.*, II. 54; *In I. Sent.* 23. 1. 1 sol. (Mandonnet ed.), vol. I, 555.

<sup>50</sup> *In I. Sent.* 23. 1. 1 sol.; *In VII Meta.*, lect. 9 #1469; *Quodl.* II. 2. 4, (Mandonnet ed.), pp. 43-45; *S. T. I.* 75. 4 resp.

<sup>51</sup> *In I. Sent.*, I. c.; *In VII Meta.*, lect. 11 #1535; *Sum. c. Gent.* I. 21 "Amplius . . ." (Leon. man. ed.), pp. 22b-23a; *S. T. I.* 85. 1 ad 2; 75. 4 resp.

<sup>52</sup> *In I. Sent.*, 23. 1. 1 sol.; *De Ente* III, p. 24.

<sup>53</sup> " . . . Secundum hoc ergo, cuicumque potest aliquid accidere quod sit de ratione suae naturae, in eo differt res et quod quid est, sive suppositum et natura. Nam in significatione naturae includitur solum id quod est de ratione speciei: suppositum autem non solum habet haec quae ad rationem speciei pertinent, sed etiam alia quae ei accidunt; et ideo suppositum signatur (sic) per totum, natura autem, sive quidditas, ut pars formalis . . ." *Quodl.* II. 2. 4 resp., (Mandonnet edition), p. 45. Cf. *In VII Meta.*, lect. 5, #1379, and lect. 11, #1535.

"Ad primum ergo dicendum, quod ex unione animae et corporis constituitur homo et humanitas: quae quidem duo hoc modo differunt: quod humanitas significatur per modum partis, eo quod humanitas dicitur qua homo est homo, et sic praecise significat essentialia principia speciei, per quae hoc individuum in tali specie collocatur; unde se habet per modum partis, cum praeter hujusmodi principia multa alia in rebus naturae inveniantur: sed homo significatur per modum totius; homo enim dicitur habens humanitatem, vel subsistens in humanitate, sine praecisione quorumcumque aliorum supervenientium essentialibus principiis speciei; . . ." *Quodl.* IX. 2. 2 ad 1, (Mandonnet edition), p. 340.

Cf. *S. T.* 29. 2 resp. et ad 3; I. 3. 3 resp.

the essence of matter.<sup>54</sup> The *forma totius* differs from the *forma partis* as whole from part, for the *forma totius* itself is a composite of substantial form and common matter: it is the whole essence, of which the substantial form is a part. It is formal as constituting the supposite in its species, and is received by the supposite not as something outside the essence of the supposite, but as its very essence, participated according to the measure of the individual matter. The formal character of the *forma totius* is derived from the substantial form which it includes, and which is the determining principle of the essence. Thus it is a form which is itself a *totum*, a composite of matter and form; and which is the form of a *totum*, the supposite.<sup>55</sup>

The nature, as *forma totius*, stands in the following relationships:

- (a) It is distinct from the supposite as part from whole.
- (b) It is distinct from the substantial form as whole from part.
- (c) It is distinct from the individual matter and accidents of the supposite as part from part.

*Materia communis*, the common matter included in the essence, is matter in the genus of substance, as proportioned to the substantial form. *Materia individualis*, excluded from the essential principles, is matter in the genus of quantity, as proportioned to dimensions. This distinction between *materia communis* and *materia individualis* is possible because matter, potency in all genera, is *diverse matter* as it has diverse proportions to form.

There is one nature in the thing, with a single substantial form as the determining principle. Because forms differ as the perfect and the imperfect; and because the perfect contains virtually the perfections of the imperfect; one substantial form may actuate matter simultaneously at several levels of perfection, making it thus to subsist, to be body, to be living, to be animal, to be man.

Thus among things existing in matter there is a twofold community: (a) every material substance has within it a principle of pure potency by which it is in potency to the form of every other material substance; (b) perfections are common to many things of different natures, the degree of community varying inversely as the degree of perfection.

#### PRINCIPLES OF THE *Res Naturae* AND KNOWLEDGE BY GENUS, DIFFERENCE, AND SPECIES

From our study of the modes of predication we found that in the enunciations

Man is animal  
Man is rational  
Man is rational animal  
John is man (animal, etc.)

<sup>54</sup> The substantial form, *forma partis*, is at times spoken of in another sense as a *forma totius* when it is said to be *tota in qualibet parte* as the perfection, the form of the whole body. Cf. *S. T.* I. 76. 8 resp.; *Sum. c. Gent.* II. 72. The term *forma totius* as it occurs in such texts, however, has not the signification which it has in the texts we are now considering.

<sup>55</sup> Cf. *Sum. c. Gent.* I. 21 "Item . . ." (Leon. man. ed.), p. 23a; *Quodl.* II. 2. 4 resp., (Mandonnet edition), p. 45 and *ad. obj. in contr.*, p. 46; *S. T.* I. 85. 3 ad 4; *Quodl.* IX. 2. 2 ad 1., p. 340; *De Pot.* 2. 1 ad 2; *In I. Sent.* 23. 1. 1 sol.

predication is made by identity: the predicate is always of the essence of the subject, signifying the essence diversely. The essence, therefore, which is signified by the terms

John (humanity in this matter)  
man  
rational animal  
rational  
animal

is the same nature found existing according to different modes in knowledge. All of these knowledges are caused by and proportioned to the singular material substance as it exists in nature; for not only is it the specifying principle of our knowledge, determining the intellect to the knowledge of *this* nature; but also it is the act to which the intellect as a cognitive potency is proportioned, and to which we must look, consequently, for principles of the kinds of knowledge which we find in human intellection.

Having determined the principles of being of material substances in nature, we can see now to what causes in the thing the concepts of genus, difference, species, and individual may be traced. Since in the suppositum there are three principles only: matter, form, and the accidents which together with the essence make up the suppositum, we must find in these principles the causes which we seek. Genus, as we shall see, is reduced to matter: diversity of genus comes from a diversity of matter. Diversity in species is reduced to diversity in the ultimate determination of form. Individual diversity is reduced to diversity of matter and to accidents.

Genus is taken from matter. It is clear that genus is proportioned to difference as potency to act, as the indeterminate to the determinate. We may set up the following proportionality:

genus		potency		matter		substance		
—————	as	—————	as	—————	as	—————	etc.	
difference		act		form		quality		

Within that general proportionality, however, we can determine what potency-act structure is most like the proportion of genus to difference. Clearly it is the proportion of matter to form.<sup>56</sup> For we are concerned with essential predication (*per se* in the first mode). In the predication of genus and difference the predicate is always part of the definition of the subject. Differing as the indeterminate and

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"... Natura igitur speciei constituta ex forma et materia communi se habet ut formalis respectu individui, quod participat talem naturam . . ." *In II Physic.*, lect. 5. (Vives ed.), vol. XXII, 352a.

"... Humanitas non est forma partis quae dicatur forma quia informat aliquam materiam vel subjectum; sed dicitur forma totius, in qua suppositum naturae subsistit; . . ." *Quodl.* IX. 2. 2. ad 4. (Mandonnet ed.), p. 341.

<sup>56</sup> "Et ex hoc (i.e. from the modes in which genus, difference, and species signify the essence) patet ratio, quare genus et species et differentia se habeant proportionaliter ad materiam et formam et compositum in natura, quamvis non sint idem cum illis: quia neque genus est materia, sed a materia sumptum ut significans totum; nec differentia est forma, sed a forma sumpta ut significans totum . . ." *De Ente* III, p. 22.



the determinate, and signifying the essence in each case, genus and difference are most like the essential principles, matter and form, which also are proportioned as the indeterminate to the determinate.

The genus is not simply matter. This is clear not only from the mode of predication of genus as signifying the whole thing, not a part; but also from the fact that genus, as the first part of definition, is a principle of human knowledge. Matter, in itself unintelligible for the human intellect,<sup>57</sup> cannot by itself be a principle of our knowledge. Genus, therefore, can be taken from matter only as matter is intelligible, in these two ways:

(a) by analogy or comparison. Thus we say that matter is related to natural bodies as wood is related to table, or as substance to quality.

(b) by the form through which it is in act; for everything is known in so far as it is in act, not in so far as it is in potency.<sup>58</sup>

As matter is known in this second way, through its form, it affords a twofold basis for genus and generic diversity.

First, matter is the source of generic diversity as it stands in diverse proportion to form. From this diversity of proportion we have the diversity of the first genera of things. This is one consideration of genus and generic diversity which we have found in the texts: those things are one in genus which have the same mode of predication; those things are diverse in genus which have diverse modes of predication, that is, are of diverse categories.<sup>59</sup> These diverse categories, or figures of predication, are based upon modes of being in which there is a diverse proportion of matter to form:

(a) That which is in the genus of substance is related to matter as to its *part*.

(b) That which is in the genus of quantity does not have matter as its part, but is related to it as *measure*.

(c) And quality is related to matter as *disposition*.

(d) And from these two genera as intermediates there follow diverse relations to matter, which is the part of substance from which substance has the character of subject, according to which it is related to accidents.<sup>60</sup>

Secondly, within any first genus—and we are concerned with the genus of substance—diversity of genus is had from matter according to the way in which matter is perfected by form.

Since matter is pure potency, and God is pure act; that matter be made to be in act, that it be perfected by some form, means only that it participate some likeness of the first act. For form is in a way the divine and the good in a thing. It is the divine, for every form is a certain participation of the likeness of the Divine *Esse*, which is pure act: everything is in act to the extent to which it has

<sup>57</sup> Matter is not absolutely unintelligible in itself. It is so for human intellect, which receives its determination by the action of the thing known. Since matter is pure potency, it cannot act, and hence cannot determine the intellect. God, however, knows matter in itself, as the faintest likeness of the Divine *Esse*, the least participation of being. Cf. *De Ver.* 2. 5 resp.; 6 resp.; 8. 11 resp.; *In I. Sent.* 36. 1. 1 sol.

<sup>58</sup> *In Boet. De Trin.* IV. 2 resp.

<sup>59</sup> *In V Meta.* lect. 8 #878; V. 22 #1126; V. 9 #889-892.

<sup>60</sup> *In Boet. De Trin.* IV. 2 resp.

form. Form is the good, because act is the perfection and the good of potency.<sup>61</sup> The composite of matter and form, then, is a mean between pure potency and pure act.<sup>62</sup>

Matter, however, does not receive the likeness of the first act equally in all cases. In some things the likeness is imperfect; in others, more perfect. As we have seen, the more perfect form or likeness contains equivalently all the perfections of the less perfect forms; lower perfections are common, therefore, to many forms. Thus sensitive nature is common to man and all brute animals. In man it is the subject of a higher perfection, rational nature; and man has sensitive nature by reason of his rational soul, which includes all lower perfections. In any other animal, however, sensitive nature is subject to imperfection or privation: it is non-rational.<sup>63</sup>

Matter, therefore, even when it is taken together with this common principle, for example, *to be animal*, is still *material*, undetermined, potential, with respect to the perfection *rational* and the imperfection *irrational*. From this material principle, which is a composite of matter and indeterminate form, the genus is taken. The generic nature, therefore, includes

- (a) matter (prime matter),
- (b) form taken as actuating matter to a certain point, beyond which it is still in potency to further perfection or privation of perfection.

The differences which divide a genus are taken from the further perfection and imperfection. Thus from the common material principle, *to have life*, is taken the genus *living body*. From the additional form or perfection is taken the difference *sensitive*; from the imperfection or privation of this further determination by form is taken the difference *non-sensitive*.

Genus, therefore, is said to be taken from matter because it signifies matter as actuated to a certain level common to many forms, a level beyond which forms differ as having or not having further perfection. Since such a common degree of actuation may be found at many levels, there is a diversity of genus drawn from matter as actuated diversely, i.e. to diverse levels. In this way the genera *body*, *plant*, *animal* are diverse.<sup>64</sup>

The whole structure of our knowledge by genus and difference is based on the mode of being of material substance. For it is the presence of an essential principle which is pure potency, potency to all natural forms from the lowest to the highest, which is the basis of this community of things which agree in being actuated to a certain degree of the perfection to which they are in potency by reason of their matter.

As genus is drawn from matter considered under an indeterminate actuation, so difference and species are drawn from the ultimate determination of form. Form, therefore, is the basis of difference. Things which are alike and are said to have a common nature up to a certain level of perfection, for example *animal* (having a nature which is the principle of sense and movement), differ as they are considered according to the full determination of their substantial

<sup>61</sup> In *I Physic.*, lect. 14 (Vives ed.), vol. XXII, 335-336.

<sup>62</sup> In *Boet. De Trin.* IV. 2 resp. <sup>63</sup> *Ibid.*, loc. cit. <sup>64</sup> *Ibid.*, loc. cit.

form,<sup>65</sup> as man, horse, and dog, if these be species.

Since man and dog and horse and every other animal is substance, body, living, and animal by the actuation of their single substantial forms, not by a hierarchy of forms giving them successive degrees of actuation, there is no such thing as simply *animal* to be found in nature: the generic nature is not one nature found in things as they exist, any more than the "average man" is to be found walking the streets of one of our cities. The forms of man, horse, dog, etc. are the same forms which are signified indeterminately by the genus *animal*. Genus in nature, in things as they exist outside the intellect, is actually many and diverse natures. It is one only in the mind, where by the abstraction from differences it can be one nature as indeterminate.<sup>66</sup>

### NATURAL AND LOGICAL GENUS

Concerning this material principle from which genus is taken, St. Thomas points out an important difference between the natural and the logical considerations of genus. As we have seen, the material principle of genus contains form and matter. The Logician considers genus only on the side of that which is formal; consequently his definitions are said to be formal. The Natural Philosopher, however, considers genus in terms of both principles, matter and form. It happens at times that something is common generically according to the Logician, but not according to the Natural Philosopher; for the likeness of the first act which one thing imitates in a certain kind of matter is imitated by a second thing without matter, and by a third in matter which is altogether diverse, for example: stone, sun, and angel *subsist*. The Logician, finding in all these things the perfection from which he took the genus, puts them all in one genus of substance. But the Natural Philosopher and the Metaphysician, who consider the principles of things, not finding all similar in matter, say that they are diverse in genus, that the corruptible and the incorruptible differ in genus, and that those things agree in genus which have one matter and generate from one to another.<sup>67</sup>

The determination of species with respect to genus is taken from the full determination of the substantial form. It is a formal determination, a formal division of the generic nature. The species itself is related to the individual as the indeterminate to the determinate. But the determination of the individual is not from any further formal division of the nature. Though the individual diversity may be formal in one sense, that is: in the genus of quantity, where diversity of position is the quasi formal difference of quantity having position; it is in no way a formal diversity in the genus of substance, affecting the substantial character of the thing.

### RESUME

In the light of our study of the principles of the material substance, we may draw these conclusions concerning the principles of

<sup>65</sup> *Ibid.*, loc. cit.

<sup>66</sup> *De Ente* III, pp. 22-23; *In VII Physic.*, lect. 8 #8, (Leon. ed.).

<sup>67</sup> *In Boet. De Trin.*, loc. cit. This text is important, and must be studied carefully in any discussion of the special problem of natural and logical genus.



our knowledge of genus, species, and individual in the *res naturae*:

(1) The diversity of the first genera of things is taken from matter as proportioned diversely to form: as a part, as measured, as receiving a certain disposition, etc.

(2) Within the genus of substance, in which the mode of predication remains the same, there is a second diversity of genus taken from matter as actuated to a certain degree of perfection and still potential with respect to the ultimate determination of form.

(3) The *material* principle from which genus is taken, therefore, is a composite of matter and of form considered indeterminately.

(4) Many diverse genera may be had according to the level of actuation included in the indeterminate form, for example, substance, body, animal.

(5) The difference is taken from the ultimate determination of form: that actuation beyond the common indeterminate actuation which is included in the genus.

(6) As genus is indeterminate with respect to perfection or imperfection beyond the common level of actuation, so difference is indeterminate with respect to the *material* principle whose ultimate determination alone it signifies.

(7) The species is constituted by its ultimate difference. It is taken from the composite essence, matter and form. It signifies the nature under the full determination which it receives through its substantial form.

(8) Since there is only one substantial form in the *res naturae*, one thing is substance, body, living, and animal by reason of its human soul, which actuates it to all these perfections; another is all these things by the form of horse; another by the form of dog, and so forth, taking these as examples of species.

(9) Actually, therefore, there is no form in nature corresponding to the genus. As the generic nature is found in things existing, it is many natures. Its unity is achieved only by the removal of determination, removal of the ultimate effects of the determinate forms by which things stand in their being. The genus is not one nature found in things, but many and diverse. It is one in the intellect alone, where it can exist as the indeterminate.

(10) Though the species is as the indeterminate with respect to the individual, yet the species is one nature found existing in things. For the determination of individual with respect to species is achieved not by a formal division, which would cause diversity in species, but by a division of matter as it is under dimensions.

(11) In the singular existent, the specific nature as *quo est* and the individuating principles and other accidents together make up the supposite.

(12) Since genus, difference, and species signify the whole thing that is; and genus and difference can be predicated of the species by identity; and genus, difference, and species can be predicated of the individual by identity; genus, difference, and species include indeterminately the individuating principles and all that is found in the supposite which does not pertain *per se* to the nature, and which they do not signify determinately.

(13) Genus, difference, and species, therefore, signify the nature or essence as *quod est*, as the whole thing that is; not as *quo est*, the *forma totius*.

(14) Yet they are all based on the common nature as *quo est*, the *forma totius*; for they signify *per se* and determinately only the essential principles of the supposite.

(15) The absolute nature, or common nature (the essence signified as *quo est*, the *forma totius*, the essence signified with precision of anything not pertaining *per se* to the essence) is itself not predicable of the individual. It is the *natura speciei* or *natura generis* (as it is signified indeterminately, for example, *animalitas*); the principle of the species, or of the genus. It is not the species or the genus.

(16) Just as the essence as *quod est* may be signified determinately or indeterminately by the species, genus, or difference, so the essence as *quo est*, the *forma totius*, may be signified determinately or indeterminately as the principle of species, genus, or difference: *humanity*, *animality*, *rationality*. In every case it is the *forma totius*, the formal part of the supposite.

(17) The whole structure which we have studied: knowledge by genus, difference, and species, diversity of signification of the essence as *quo est* and *quod est*, and the composition of nature and individuating principles is founded upon the kind of causality which we find in prime matter. Moreover, the related problems of *genus subjectum* and integral part can be solved only in terms of the potency of matter. In every case the manifold of knowledges in which the material substance exists is traced to the manifold of actuations to which matter is determined by a single substantial form. Genus, difference, species, definition, *forma totius* (as principle of genus, difference, or species), *genus subjectum*, and integral part represent a certain degree of actuation of matter, considered either with or without precision. Thus genus does not prescind from the further determination of the difference; difference does not prescind from the material principle of the genus; genus, difference, and species do not prescind from individual matter. They include indeterminately what they do not signify determinately. But *forma totius* and integral part prescind from any further determination. Not only is there this variety arising from precision and non-precision, but the technique of precision itself may be applied in two ways. There may be precision of further formal determination, as in the case of *body* understood as integral part: matter actuated to the perfection of bodily substance (or sensitive nature, since *body* is often used in the sense of human body, to denote the animal part of man), with precision of further perfection. There may be precision of material determination (individuating principles, individual matter), as in the case of the *forma totius*. All of these modes of signification are possible, however, only because of the nature of prime matter, the principle of pure potency in material things.

(To be continued.)

WILLIAM A. VAN ROO

## BOOK REVIEWS

THE DESTINY OF WESTERN MAN by W. T. Stace. *Reynal & Hitchcock, New York, 1942. Pp. x + 322. \$3.00.*

This volume evidently had its start in the recent conferences on Science, Philosophy, and Religion. Its purpose is to formulate the basic philosophy of democracy as opposed to the ideology of the totalitarian state. It is not concerned immediately with the political form of democracy but rather with its philosophical foundation, with the primary principles of human nature and human life which the political form presupposes. The book is written in non-technical language and definitely for the undergraduate mind.

Professor Stace divides his treatment of the question into three parts. In the first he repudiates moral skepticism and affirms human nature as the basis of moral truth. This human nature he conceives in terms of evolutionary materialism with the modern psychological variations.

He then proceeds to a historico-philosophical analysis of Western civilization, of the Greco-Christian tradition whose fairest flower is contemporary democracy, and of the recent totalitarian outcropping. He finds that the contribution of the Greeks, more specifically of Plato, to Western civilization was the principle of the primacy of reason. The meaning of this principle is that "it is the proper function of reason to govern and control the other psychological elements" (p. 93). The contribution of Christianity he limits to the order of feeling and emotion. The law of charity marks the peculiar characteristics of the Christian ideal. But Christianity itself has never troubled to provide its rational justification. Analysis shows, however, that the philosophical, or psychological, or rational foundation of this ideal is the principle of sympathy. "What this principle tells us is that any emotion of feeling, or complex of emotions or feelings, may flow from another person into me, and may thereby become my feelings" (p. 113). Christianity asserts the primacy of sympathy. On these two principles, the Greek and the Christian, is based the core principle of democracy, the principle of the infinite value of the individual, and its corollaries, liberty, equality, and individualism. The infinite value of the individual is interpreted as meaning that man is the measure of all things, and consequently above any scale of values.

The source of the totalitarian ideology is found in the reaction against the false rationalism of ancient and medieval times. This rationalism consisted in the scorning of positive science. The reaction took the form of the assertion of the primacy of will (Schopenhauer), and more narrowly, the primacy of power (Nietzsche). Inherent in this theory and in the totalitarian practice which is its offspring, is the denial of the infinite value of the individual.

The book concludes with an evaluation of these two conceptions of human life on the basis of the humanism previously elaborated. The vote of course is in favor of democracy.

Professor Stace has, in view of the modern confusion, shown remarkable keen-mindedness in his firm grasp of the truth that morality is at basis the expression of human nature. He has done well to reject any morality that has been "arbitrarily imposed upon men by God" (p. 20). It is undoubtedly due to that modern confusion that Professor Stace has fallen into the error of including in bulk the whole 2000 years of Christianity under the common name of such an "impositionist morality." I feel certain that if he were to examine any one of the representative thinkers of



Catholic Christianity, such as St. Augustine, St. Thomas, or, since he is in the subject of law, Suarez, he would realize immediately that at least for one solid block of Christianity, morality is nothing else than the "harmonious functioning" of human nature truly and adequately conceived. He has been surprisingly keen in remarking the fundamental impositionism of Kant's morality, but he has failed to discover Kant's roots in William of Ockham and Martin Luther, the founder of modern non-Catholic Christianity.

This misconception of Christian moral theory and the consequent flight from "Palestinianism" has unfortunately led to confusion in placing the alternative to impositionism. Professor Stace believes "It is essential to find in the key idea of our civilization a meaning which is capable of justification independently of the truth of theological doctrine" (p. 128). By theological doctrines he means such natural truths as concern man's relationship to God, his spirituality, and his immortality. As a result he finds himself hard put to it to define the "satisfactory life for man" and is reduced to asserting that such a life is "one which the liver intuitively feels to be satisfactory" (p. 65). Consequently also he finds difficulty in establishing his sound belief in the essential community in nature of all men.

However, Professor Stace has perceived the best in the ethical thinking of the Greeks when he centers on their sense of the order in human nature as their primary contribution to Western civilization. I think, though, the Greeks themselves would have been able to defend their "assumption" of the superiority of man on the basis of an absolute scale of values. Their sense of order in nature taught them that "the higher" is that which is the less limited, or in other words, *being* is better than *non-being*. Reason is better than sense or matter because it "can do more," or as Plato put it, "Man surpasses all other animals in that he can know the gods and justice" (*Meneaxenus* 236d). A large portion of the Greeks too would have been surprised to have an asceticism "which seeks to stamp out the passions and appetites altogether" (p. 69) denied to them. Certainly such an asceticism is repudiated by Catholic Christianity.

But most important of all, the author has seen the limitation of Greek intellectualism and the necessity of the Christian ideal of selflessness. He has appreciated the fundamental truth that the idea of human person is not completely independent, but necessarily implies a relationship of knowledge and love with other persons. His principle of sympathy proclaims the "psychological" fact that the happiness of one person is intimately bound up with the happiness of his fellows. But the attempt to formulate the philosophical basis of this truth, and of the Christian ideal of charity is vitiated by his refusal to establish the value of the human person on any more solid basis than that the individual is the measure of all things.

Professor Stace's position is that the value of the individual consists in the fact that it is an end and that all other things are a means for it. But, in virtue of the law of sympathy one personality recognizes his own personality in that of others. Hence he attributes "infinite value" universally to all individuals.

There is a double confusion in this reasoning. The first consists in identifying independent value, that which has worth or value in itself and not merely as a means to another, with infinite value. Nothing which is hedged in on all sides with limitations can have infinite value, though it may have independent and inviolable value. The second and more fundamental confusion is the identification of end with value or worth. An end is that to which something is ordered. Intrinsic value or worth is independent of such an ordination, denotes rather the capacity for it.

A thing does not have value because it is an end, but it is an end because it has value. End presupposes value. This is the Christian position. Man has a value in himself, a value which is based on his intrinsic nature as a free, spiritual being directly ordained to the enjoyment of God. Because he has this value he is an end for all beings which do not have such a nature. Because he has this value he is the object of "sympathy" on the part of other persons. Sympathy, or love, does not create the value of other individuals. It is a response to the discovery of that value. Hence one does not deduce the "infinite value" of individuals from the "Christian principle of sympathy," but rather sympathy is consequent upon the independent value of the human person.

The confusion becomes more manifest when Professor Stace defends the principle of sympathy against Nietzsche. There he drops the position that sympathy is the basis for attributing infinite value to all individuals, and states that it is the response to this value. But in so doing he has taken away every reason, given his principle of the human individual as the measure of value, for recognizing an inviolable value in other individuals. The philosophy of the super-man, super-race, or super-class is a direct consequence of such a principle.

Professor Stace gives a clear and perceptive exposition of the meaning of the totalitarian theory. He brings out strongly the relationship between totalitarianism and the antirationalistic philosophies of will and power. It is not so clear that he appreciates the relationship between totalitarianism and exaggerated individualism.

The book is a winner of a \$2500 prize as "the best non-fiction book written for the general reader by a member of the staff of an American college or university." That such a laborious effort to reformulate truths worked out long ago received this recognition is an indication of the surprisingly large number of contemporary thinkers who do not know the "Western tradition." Intellectual isolationism is well kneaded into our mentality.

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## NATIONAL PATRIOTISM IN PAPAL TEACHING by John J. Wright. *The Stratford Company, 1942. Pp. 358.*

Father Wright has issued unobtrusively such a learned and constructive treatise on the much abused concept of "patriotism" in its historical, anthropological, sociological, psychological, ethical, and theological aspects that anyone who is willing to devote to it the deliberate and sustained analysis which it requires can only wish that it might now be made—by its author who could do it best—the basis of a volume of a more popular character to clear away the sophistical slogans and panaceas which befog the atmosphere today.

Although Father Wright cleaves closely throughout to the papal teachings, he has also ranged far abroad, in many languages, to winnow the teachings of reactionaries, liberals, and radicals, many of whom are often, if not always, at odds with that Catholic view which alone can save our arrogantly secularized societies at the cross-roads. We are confronted with leaders and writers as absurd as the notorious medicine-man of Nazism, Alfred Rosenberg, as profound—if too often perverse—as the distinguished British leftist, G. D. H. Cole, as loftily idealistic—if occasionally quixotic—as Sir Norman Angel. Father Wright is by no means irreconcilably controversial. In that spirit of true criticism which calmly seeks everywhere "the best that has been thought and said," he reconciles with Catholic

thought an abundance of material, sometimes from the most apparently unpromising sources. He might convert more than one sophist—if the sophist would pause and listen with humility. And who can tell when and where and how God will give the grace required? Father Wright's book is Catholic Action in the finest sense.

In the space allotted here, it would be impossible to provide a representative synopsis of so rich a treatise. All that can be done is to offer a catalogue—and even that a fragmentary one—of its multifarious topics in the hope that the reader will be tempted to go to the source.

From a description of the papal conception of patriotism as "a virtue comparable in dignity to religion" the author passes on to a typically Catholic insistence on the primacy of personality implying "the subordination of the individual as an individual to the society of *persons* and consequent obligation to use his goods in accordance with the justice and charity due to others," the typically Catholic mediation between the anarchistic orientation of much that goes by the name of liberalism and the group-idolatry of Communism, Fascism, and Nazism alike.

The "essential unity of the human race," always defended by traditional Christianity, is shown to be confirmed—if confirmation were needed—by the genuinely scientific sciences of human nature which nowadays converge more and more with divine revelation. And this unity is shown to be compatible with the fact that "organized society has historically been multiple." We proceed to a careful scrutiny of the notion of "fatherland" accompanied by a comprehensive contrast of this concept with that of the "nation." All this is abundantly exemplified by descriptions of the complications which rend loyalties within specific nations, for instance, unhappy Czechoslovakia. A demonstration of the proper role of the "state" in nation and fatherland leads to an appraisal of the molding significance of linguistic, historical, religious, and other traditions and the centrifugal influences of political parties, class-struggles, and religious differences. There is an impressive account of the success of Catholic Action in various countries in securing national well-being which should be broadcast among those who still suffer from the paranoiac delusion that "papist" pressure is subversive. All this is fortified by an enumeration and exposure of certain pseudo-patriotic philippics against Catholicism. True patriotism, in contrast with the "pseudo-mystical" theory of the "Ideal Will" and kindred quackeries, is shown to be perfectly congruous with a sane internationalism.

The resourceful and heroic efforts of the Popes, especially of Benedict XV, in the midst of wars and in the face of incessant calumny, to reveal the true perspective, are set in quiet and vivid antithesis to the hate-engendering "solutions" of European Freemasonry, Communism, Fascism, Nazism, and the protean forms of romantic-naturalistic individualism loosely characterized as "Liberalism." There is a survey of the achievements of the Catholic missionaries in the furtherance of a charitable internationalism. And there is a most enlightening account of the internationalistic influence of various saints. The whole dissertation attains to a lofty climax with a deeply consoling description of that saints' vision of Christ the King which alone will serve as the nucleus of all those doctrines and practices which may yet save humanity from terrestrial catastrophe and actualize that universal peace which the world cannot give.

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THE JUDGMENT OF THE NATIONS by Christopher Dawson. *Sheed and Ward, 1942. Pp. 222. \$2.50.*

Today the majority of Englishmen, Mr. Dawson assures us, feel that they are fighting not only for their lives and property but for things greater than themselves and deeper than political or economic interests. "They believe they are standing against violence and treachery and injustice in the cause of all mankind." The enemy which they meet is really the spirit of evil, a thoroughly secular spirit denying religion and all spiritual values, a spirit which has set out to wolf with hungry appetite all wealth, all power, all men—and all of man, his body and his soul. Materialized in the totalitarian state and ravening brutally throughout the world, this spirit of evil must be overcome, or Western civilization, and all spirituality and culture, will be destroyed. The encounter between democracy and totalitarianism, as Mr. Dawson points out, raises this fearsome question: How can democracy defeat totalitarianism without itself becoming totalitarian? How can democracy engage with the spirit of evil without itself becoming evil? If democracy should defeat the totalitarian state but nevertheless should be seduced into violence and treachery and injustice, then the real enemy, the spirit of evil, will be as triumphant in democracy's victorious peace as in its conquest. To avert the danger there is only one course to be followed: return to Christianity. "The return to Christianity is the indispensable condition for the restoration of a spiritual order and for the realization of the spiritual community which should be the source of a new life for our civilization."

The problem proposed, Mr. Dawson, in the remainder of the first part of the book, analyzes the breakdown of Western civilization, proceeding upon the principle that the dominant and formative element of culture and civilization is the religious element. The unity of Europe was first assailed by the schism between Western and Eastern Christianity, was further disrupted by the division of Europe into Catholic and Protestant, and was still further broken by the split of Protestantism into many sects. So weakened, Europe entered upon the first phase of disintegration. Nineteenth-century liberalism, the liberalism associated with the Free Trade movement and Protestant nonconformity, was a failure, as was manifested by the collapse of constitutional government. Secondly, the League of Nations, set up to secure the principles of liberalism, was a failure; for its ideals of international peace and order, though good themselves, were not founded upon a spiritual basis and therefore gave way under the vehemence of war, revolution, and economic disaster. Lastly, Western culture became wholly secularized when the state surrendered to a frenzied will to power, scrapping everything except science in order to exalt itself. There is left today, in consequence, this choice: either we must submit to the spirit of evil and suffer the totalitarian state, which has absorbed into itself all religion, morality, and spiritual values; or we must take up the sword of the spirit and revivify spiritual principles as the formative, living elements of social and economic order. Thus closes the first part of *The Judgment of the Nations*.

The second part treats of the restoration of Western civilization. In spite of the unpopularity of the planned state (one thinks at once of Hitler's "New Order"), the Europe of the future must be planned, freedom and spirituality being accorded their full scope. Making capital of the hunger for the spiritual and cultural which arises after the mechanization and secularization of society has taken place, and recognizing that there is in history divine action for which man can prepare and which he can further, Europe must reorganize its life upon the Christian social principles, universal and transcendent over all the boundaries of class, party,

and nation; and if the task is difficult, let encouragement be taken from the fact that the spiritual, however weak its supporters, is stronger than all the armies of the world. More specifically, and by way of a blueprint for the restoration of Western civilization, Mr. Dawson suggests a federation of the nations of Western Europe comparable to the United States of America, the Union of Soviet Socialist Republics, and the British Commonwealth of Nations.

*The Judgment of the Nations* may seem dry and stinted reading to one who is not acquainted with Mr. Dawson's earlier works. So unified is his thought and so closely connected are his books that this latest work is like a conclusion to what he has been saying all along; it is written in summary, almost every sentence a summing-up of a paragraph or chapter in some other book. Mr. Dawson seems to have developed his ideas at large in *The Age of the Gods*, *Enquiries into Religion and Culture*, *The Making of Europe*, and *Progress and Religion*; then he digested his ideas and stated them concisely in *Religion and the Modern State* and *Beyond Politics*, at the same time applying them to twentieth-century social and political questions. *The Judgment of the Nations* follows organically, a reiteration in outline of the author's basic ideas in so far as they refer to immediate contemporary problems. This is not to say that *The Judgment of the Nations* is a book written in shorthand, which only they can understand who have the key to it. No; Mr. Dawson is such a judicious, sharp observer that he cannot fail to arouse us to an awareness of the forces he sees struggling in the Western world today. The vision will not be idle for anyone. And it may—let us hope it will—inspire students planning the future world at peace to be apostles of Christian civilization and culture.

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ETUDES SUR LA CONNAISSANCE MATHÉMATIQUE by Thomas Greenwood. *Les Éditions de l'Université d'Ottawa*, 1942. Pp. viii + 112.

Professor Greenwood has presented in this little volume a compact series of essays on the philosophy of mathematics; his subjects are: *Les principes de la logique mathématique*, *La pensée mathématique d'Aristote*, *La connaissance mathématique d'après Saint Thomas*, and *La connaissance géométrique*. As the author avers (and the reader recognizes easily), these studies were originally prepared independently of one another; they were collected together and published in one volume only after separate publication in the *Revue de l'Université d'Ottawa*. This, however, does not mean to imply that the volume is without unity. The fact is that the studies do have an intimate bond, for an obvious attempt is made in them (to use the words of the author) "de connaître et d'analyser ces problèmes afin de pouvoir être en mesure d'en juger la valeur en les rapportant aux solutions fondamentales de la philosophie chrétienne." And this is indeed an admirable enterprise for a Scholastic philosopher, inasmuch as the problems here discussed have been but rarely investigated in a completely scientific way by competent Scholastic thinkers. Too often, for example, Scholastic philosophers have quite freely accepted the opposition between mathematical logic and Aristotelian logic that a current nominalistic tendency has placed between them, overlooking in great part any discussion of the critical value of the logicistic technique. This appears to be an unfortunate circumstance; but there does exist some attempt, as manifested in more recent approaches, to rectify this misapprehension.



On the whole, Professor Greenwood's studies are good. The relative ease and simplicity with which he discusses the various topics is evidence of careful and painstaking research. He is moreover measured in his judgments, though not averse to accepting positions somewhat novel (at least in their manner of statement). And even if it is fairly obvious that not all his conclusions will be universally accepted (the millennium is not yet arrived!), all readers in fairness to Professor Greenwood must admit that he has not made any assertions without at least some justifying reasons. There is, however, no need to enter into any discussion of those which appear unacceptable to the reviewer: in the first place such would be merely a presentation of personal views, and secondly a brief review is scarcely a place to institute an academic debate.

The first essay gives a discussion of logistics from the two-fold viewpoint of its philosophical inspiration and technical developments. And the conclusions that are collected at the end of this section appear admirably balanced and sane.

The next two studies are indeed quite appropriate, discussing as they do certain aspects of Aristotelian and Thomistic thought in relation to the philosophy of mathematics. The reviewer agrees most heartily with Professor Greenwood that, contrary to non-Scholastic opinion, these two philosophical giants have furnished many items of permanent value for the solution of numerous problems that have arisen in the philosophy of mathematics. The opinions of Aristotle and Aquinas have been prejudged too often with an anti-medieval bias.

The final essay on geometrical knowledge appears to be the weakest of the four, though by no means is it to be considered without value. There are many fine points contained in it.

These studies of Professor Greenwood have earned approbation for themselves and commendation for their author. Such at least is the reviewer's opinion.

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THE PHILOSOPHY OF EDMUND HUSSERL by E. Parl Welch. *Columbia University Press, 1941. Pp. xxiv + 337. \$3.25.*

There has been definite need of a work like this to make Edmund Husserl's *Phenomenology* accessible to English readers. So Dr. Welch deserves thanks for his painstaking efforts to translate not merely the German, but the elusive ideas of the "Denker zu Freiburg" into everyday language. The author gives a very good summary of Husserl's main contributions to philosophic thought; he shows the origins of his *Phenomenology* in his studies of Mathematics, Logic and Epistemology; and then traces its development through various stages until it reaches its culmination in *Pure Phenomenology*.

It is only natural that anyone attempting to compress Husserl's life-work into a single volume should find it exceedingly difficult to make a judicious selection of the important elements. Dr. Welch himself is aware of this difficulty, but he overcomes it by including all the cardinal principles of Husserl's system, though perhaps some of them are explained too sketchily—as, for example, intentional experience and categorical intuitions. However, there might be some justification for this brevity in view of the fact that Dr. Welch is writing for readers who have more than a superficial acquaintance with *Phenomenology*.

There is no doubt that the author has read wisely and deeply in Husserl's philosophy. At the University of Southern California he "majored"



in this subject; and his various publications since his Doctorate show that he has been making it his life-work. Naturally, this specialization has led him to be over-partial to the phenomenological school, and too prone to condone its obscurities. But here again the author may be excused, as he explicitly states that it is altogether beyond his purpose to criticise Husserl's philosophy. The controlling purpose in this volume is to present all that is essential to Husserl's system. This reviewer believes that the author has achieved his purpose.

Of course, this is not a book that can be read rapidly or at one sitting. It is indeed a short-cut to a good knowledge of Husserl's thought, but that does not dispense with the necessity of cudgelling one's brain in order to puzzle out many of the abstruse point of this "Pure Phenomenology".

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ON LIGHT by Robert Grosseteste, translated by Clare C. Riedl.  
*Marquette University Press, 1942. Pp. 17, \$0.50.*

This little brochure is the first of a series of "Mediaeval Philosophical Texts in Translation." The English text, together with the Introduction, Bibliography, and annotations, will be of great assistance to any one who wishes to comprehend the "light metaphysics" of Grosseteste. The theory is about the expansibility of matter by "the first corporeal form, or light" (p. 3), to the limits of the outermost heavens where matter is most rarefied. From there the light is reflected back, not as "lux" but as "lumen", which latter accounts for the formation of the lower spheres in increasing density, down to the most dense, the Earth.

Mrs. Riedl's comments are illuminating, and scholars will be grateful. One wonders, though, whether she should not have qualified her statement that for Aristotle matter was pure potency. Also it might have been worth while to mention that the doctrine of the expansion and contraction of matter by form (to determinate limits) was contained in the commonly accepted Aristotelian teaching on Augmentation and Diminution (cf. e.g., *Phys. IV, 9, 217<sup>a</sup> 25, sqq.; St. Th., In III Phys., lect. 12).*

THE CATHOLIC MIND: *America Press (published monthly, \$2.00 a year.)*

The principles that should govern Catholics in their attitudes toward contemporary situations are clear enough in theory. But their application to particular instances is usually devious enough to land Catholics on both sides of many highly complex modern problems. A journal whose formal object is to "truly express the 'Catholic Mind' in its contemporary and traditional significance" will be welcomed by anyone in quest of *genuine* Catholic thinking. This well-defined aim distinguishes the new *Catholic Mind* from being just another religious publication. The matter chosen as expressing the Catholic viewpoint consists of letters and pronouncements of the Holy Father or the Hierarchy; documents of historic and contemporary value; articles of outstanding merit published in foreign and American periodicals; addresses, sermons, lectures, editorials of a notable character; brief quotations from great thinkers; answers to questions. The smart new format and excellent choice of articles augur a significant future on the ideological front.

